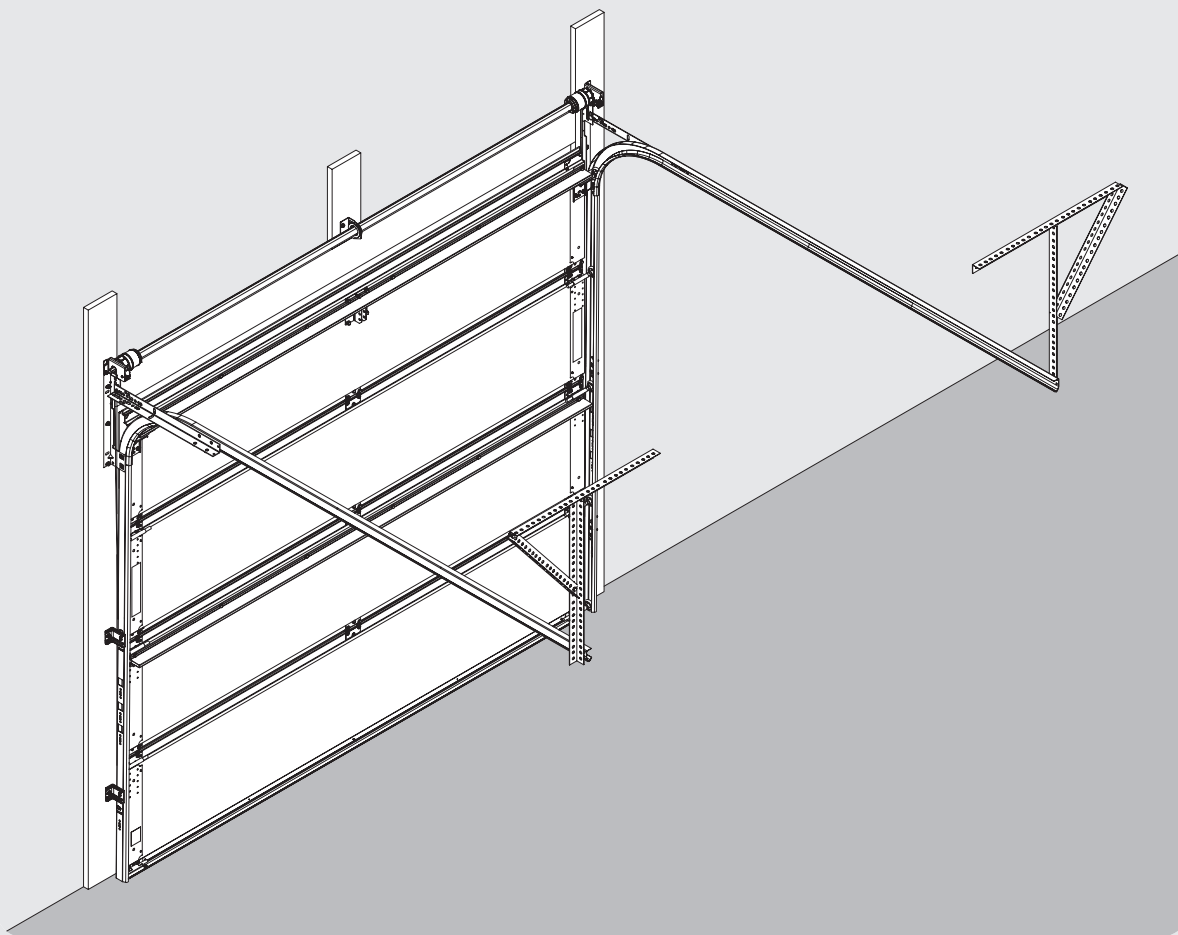




# 9700

## Torquemaster® Plus - Single and Double Spring Installation Instructions and Owner's Manual



Wayne-Dalton, a Division of  
Overhead Door Corporation  
P.O. Box 67, Mt. Hope, OH 44660  
[www.Wayne-Dalton.com](http://www.Wayne-Dalton.com)

### IMPORTANT NOTICE!

Read these instructions carefully before attempting installation. If in question about any of the procedures, do not perform the work. Instead, have a trained door systems technician do the installation or repairs.

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### Definition of key words used in this manual:

#### **WARNING**

INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN SEVERE OR FATAL INJURY.

**IMPORTANT:** REQUIRED STEP FOR SAFE AND PROPER DOOR OPERATION.

**NOTE:** Information assuring proper installation of the door.

#### **WARNING**

**TO AVOID POSSIBLE INJURY, READ THESE INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING INSTALLATION. IF IN QUESTION ABOUT ANY OF THE PROCEDURES, DO NOT PERFORM THE WORK. INSTEAD, HAVE A TRAINED DOOR SYSTEMS TECHNICIAN DO THE INSTALLATION OR REPAIRS.**

1. **READ AND FOLLOW ALL INSTALLATION INSTRUCTIONS.**
2. Wear protective gloves during installation to avoid possible cuts from sharp metal edges.
3. It is always recommended to wear eye protection when using tools, otherwise severe or fatal eye injury could result.
4. Avoid installing your new door on windy days. Door could fall during the installation causing severe or fatal injury become entrapped between the door and the floor.
5. Doors 12'-0" wide and over should be installed by two persons, to avoid possible injury.
6. Operate door **ONLY** when it is properly adjusted and free from obstructions.
7. If a door becomes hard to operate, inoperative or is damaged, immediately have necessary adjustments and/or repairs made by a trained door system technician using proper tools and instructions.
8. **DO NOT** stand or walk under a moving door, or permit anybody to stand or walk under an electrically operated door.
9. **DO NOT** place fingers or hands into open section joints when closing a door. Use lift handles/gripping points when operating door manually.
10. **DO NOT** permit children to operate garage door or door controls.
11. Due to constant extreme spring tension, **DO NOT** attempt any adjustment, repair or alteration to any part of the door, especially to springs, spring brackets, bottom corner brackets, red colored fasteners, cables or supports. To avoid possible severe or fatal injury, have any such work performed by a trained door systems technician using proper tools and instructions.
12. On electrically operated doors, pull down ropes must be removed and locks must be removed or made inoperative in the open (unlocked) position.
13. Top section of door may need to be reinforced when attaching an electric opener. Check door and/or opener manufacturer's instructions.
14. **VISUALLY** inspect door and hardware monthly for worn and or broken parts. Check to ensure door operates freely.
15. Test electric opener's safety features monthly, following opener manufacturer's instructions.
16. **NEVER** hang tools, bicycles, hoses, clothing or anything else from horizontal tracks. Track systems are not intended or designed to support extra weight.

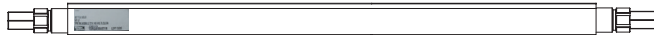
**After installation is complete, fasten this manual near garage door.**

## Package Contents

**NOTE:** Depending on the door model, some parts listed will not be supplied if not necessary. Rear supports may or may not be included with your door.



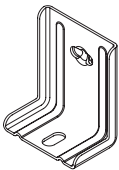
DOOR SECTIONS (AS REQUIRED)



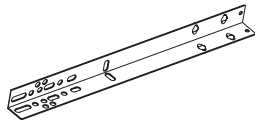
(1) TORQUEMASTER® SPRING TUBE



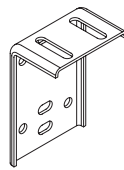
(2) HORIZONTAL TRACKS RH/LH



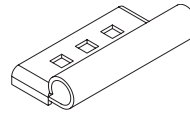
Q.I. JAMB BRACKETS  
(AS REQUIRED)



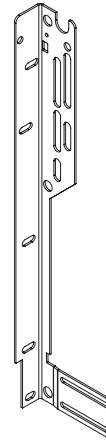
(2) HORIZONTAL ANGLES



(2) TOP BRACKET BASES



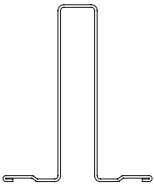
(2) QUICK INSTALL RH/LH  
FLAGANGLES (AS REQUIRED)



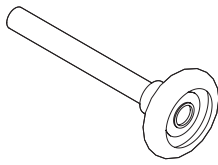
(2) FULLY ADJUSTABLE RH/LH  
FLAGANGLES (AS REQUIRED)



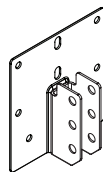
(2) VERTICAL  
TRACKS RH/LH



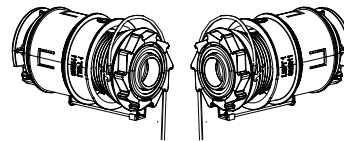
U-BAR  
(AS REQUIRED)



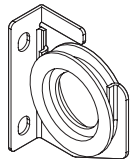
ROLLERS



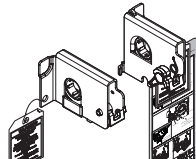
OPERATOR BRACKET



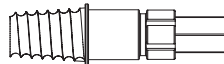
RIGHT AND LEFT CABLE DRUM/  
DRUM WRAP ASSEMBLIES



(1) CENTER BRACKET  
ASSEMBLY



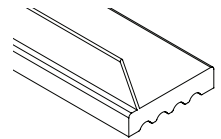
RIGHT & LEFT  
END BRACKETS



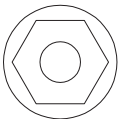
(1) LOOSE WINDING SHAFT  
(SINGLE SPRING ONLY)



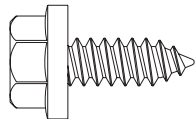
PULL ROPE  
(IF INCLUDED)



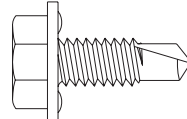
WEATHER SEAL & NAILS  
(IF INCLUDED)



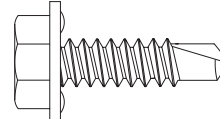
1/4"- 20 FLANGED HEX  
NUTS (AS REQUIRED)



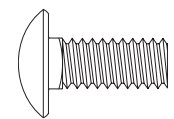
1/4"-14 X 5/8" SELF TAPPING  
SCREWS (AS REQUIRED)



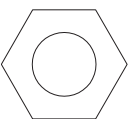
1/4"-20 X 11/16" SELF DRILLING  
SCREWS (AS REQUIRED)



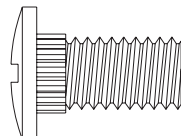
1/4"-14 X 7/8" SELF  
DRILLING SCREWS  
(AS REQUIRED)



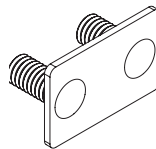
1/4"-20 X 5/8"  
CARRIAGE BOLTS  
(AS REQUIRED)



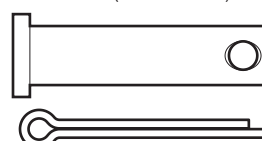
(2) 3/8"- 16 HEX NUTS  
(AS REQUIRED)



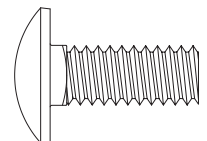
(2) 3/8"-16 X 3/4"  
TRUSS HEAD BOLTS  
(AS REQUIRED)



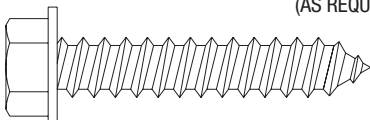
STUD PLATE  
(AS REQUIRED)



5/16"X 1-1/4" CLEVIS PIN &  
COTTER PIN  
(AS REQUIRED)



5/16" X 18 X 3/4"  
CARRIAGE BOLTS  
(AS REQUIRED)



5/16" X 1 5/8" HEX HEAD LAG SCREWS  
(AS REQUIRED)



(2) 5/16" HEX NUTS  
(AS REQUIRED)

**Please Do Not Return This Product To The Store.** Contact your local Wayne-Dalton dealer. To find your local Wayne-Dalton dealer, refer to your local yellow pages business listings or go to the **Find a Dealer** section online at [www.Wayne-Dalton.com](http://www.Wayne-Dalton.com)

## Door Section Identification

Hinges are always pre-attached at the top of each section (except top section)

**NOTE:** End hinges are stamped with a number that identifies the stacking sequence of the section. #1 end hinges are always on the bottom section. #2 end hinges are on the lock section of a four section door. #3 end hinges are on the intermediate section of a four section door and on the lock section of a 3 section door.

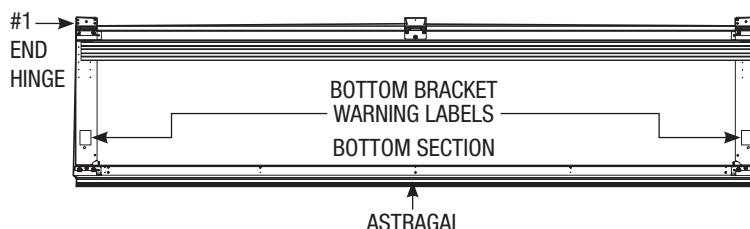
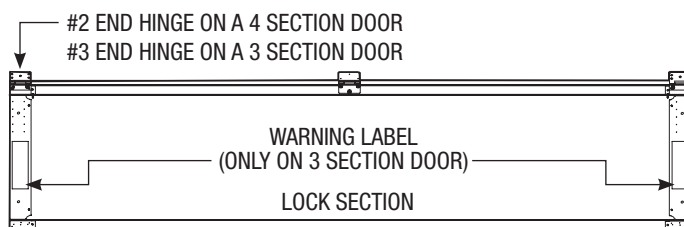
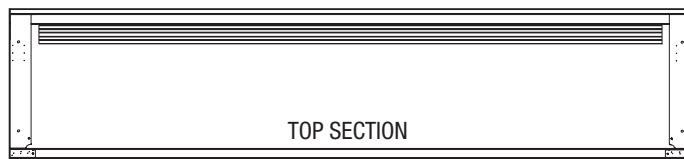
The section side view illustration shows the hinge profile of all the sections and can be used to identify each section.

The **BOTTOM SECTION** can be identified by #1 end hinges, the factory attached bottom astragal, or by the bottom bracket warning labels on each end stile.

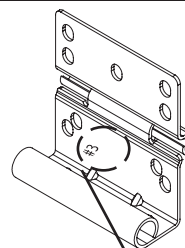
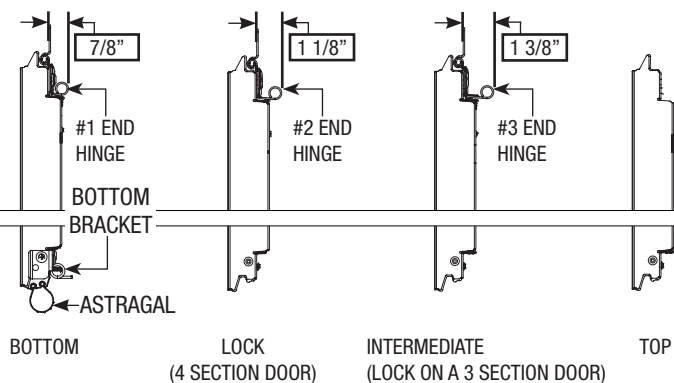
The **LOCK SECTION** can be identified by #2 end hinges on a 4 section door and by #3 end hinges on a 3 section door. Also, on a 3 section door, the lock section will come with a warning label attached to the right or left end stile.

The **INTERMEDIATE SECTION** (Only on a 4 section door) can be identified by #3 end hinges and a yellow warning label attached to the right or left end stile.

The **TOP SECTION** can be identified with no pre-installed end or center hinges on the section.



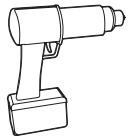
### SECTION SIDE VIEW



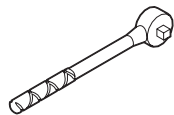
TYPICAL END HINGE STAMPING LOCATION



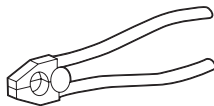
## Tools Required



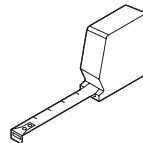
POWER DRILL



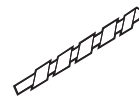
RATCHET WRENCH



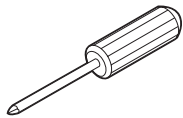
PLIERS/WIRE CUTTERS



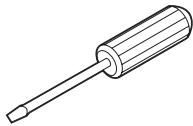
TAPE MEASURE



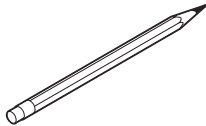
1/8", 3/16" DRILL BITS



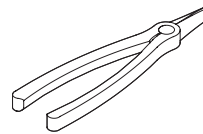
PHILLIPS HEAD SCREWDRIVER



FLAT TIP SCREWDRIVER



PENCIL



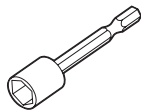
NEEDLE NOSE PLIERS



GLOVES



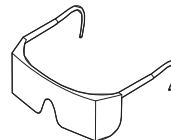
7/16", 1/2", 9/16"  
SOCKETS



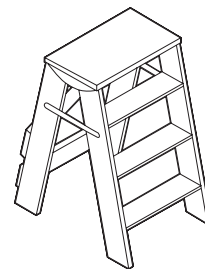
7/16" SOCKET DRIVER



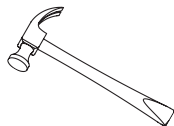
3/8", 7/16", 1/2", 9/16"  
WRENCHES



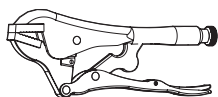
SAFETY GLASSES



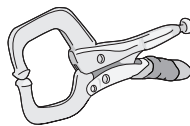
STEP LADDER



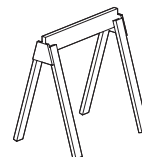
HAMMER



VICE GRIPS



VICE CLAMPS



(2) SAW HORSES

## Removing An Existing Door

**IMPORTANT:** COUNTERBALANCE SPRING TENSION MUST ALWAYS BE RELEASED BEFORE ANY ATTEMPT IS MADE TO START REMOVING AN EXISTING DOOR.

### **WARNING**

A POWERFUL SPRING RELEASING ITS ENERGY SUDDENLY CAN CAUSE SEVERE OR FATAL INJURY. TO AVOID INJURY HAVE A TRAINED DOOR SYSTEMS TECHNICIAN, USING PROPER TOOLS AND INSTRUCTIONS, RELEASE THE SPRING TENSION.

For detailed information see supplemental instructions "Removing an Existing Door /Preparing the Opening". These instructions are available at no charge from Wayne-Dalton, a Division of Overhead Door Corporation, P.O. Box 67, Mt. Hope, OH 44660, or at [www.Wayne-Dalton.com](http://www.Wayne-Dalton.com).

## Preparing the Opening

Tools Needed:  
Recommended  
tools from  
page 5

If you just removed your existing door or you are installing a new door, complete all steps in PREPARING THE OPENING.

To ensure secure mounting of track brackets, side and center brackets, or steel angles to new or retro-fit construction, it is recommended to follow the procedures outlined in DASMA Technical Data Sheets #156, #161 and #164 at [www.dasma.com](http://www.dasma.com).

The inside perimeter of your garage door opening should be framed with wood jamb and header material. The jambs and header must be securely fastened to sound framing members. It is recommended that 2" x 6" lumber be used. The jambs must be plumb and the header level. The jambs should extend a minimum of 12" (305 mm) above the top of the opening for TorqueMaster® counterbalance systems. For low headroom applications, the jambs should extend to the ceiling height. Minimum side clearance required, from the opening to the wall, is 3-1/2" (89 mm).

**IMPORTANT:** CLOSELY INSPECT JAMBS, HEADER AND MOUNTING SURFACE. ANY WOOD FOUND NOT TO BE SOUND, MUST BE REPLACED.

For TorqueMaster® counterbalance systems, a suitable mounting surface (2" x 6") must be firmly attached to the wall, above the header at the center of the opening.

**NOTE:** Drill a 3/16" pilot hole in the mounting surface to avoid splitting the lumber. Do not attach the mounting surface with nails.

Weather Seal (May Not Be Included):

Cut the weather seal if necessary to fit the header and jambs.

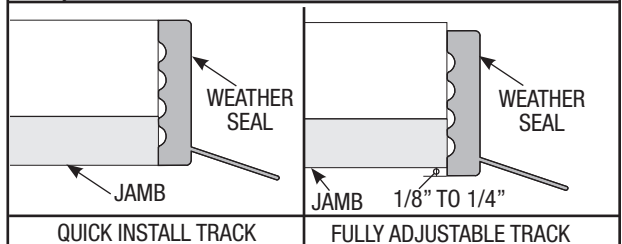
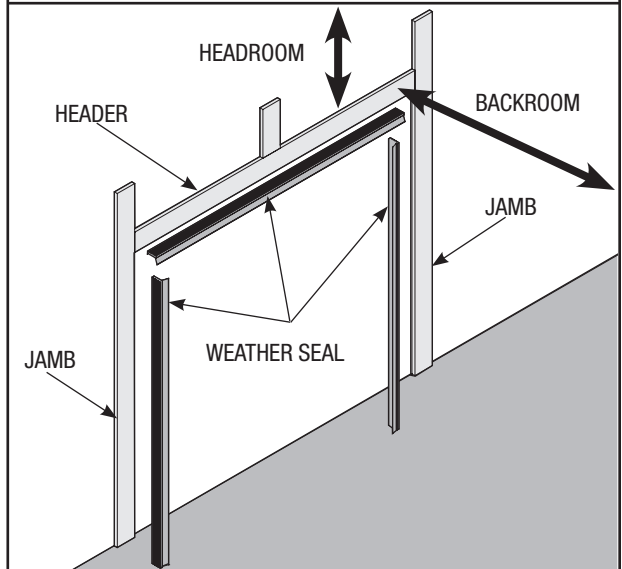
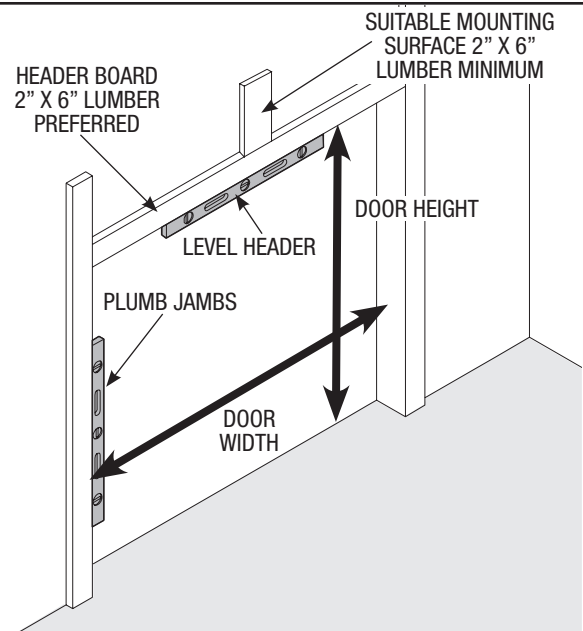
**For quick install track:** Align the header seal with the inside edge of the header and temporarily secure it to the header with equally spaced nails. Next, fit the jamb seals up tight against the header seal and flush with the inside edge of the jamb. Temporarily secure the jamb seals with equally spaced nails. This will keep the bottom section from falling out of the opening during installation. Equally space nails approximately 12" to 18" apart.

**For fully adjustable track:** Align the header seal 1/8" to 1/4" inside the header and temporarily secure it to the header with equally spaced nails. Next, fit the jamb seals up tight against the header seal and 1/8" to 1/4" inside the jamb. Temporarily secure the jamb seals with equally spaced nails. This will keep the bottom section from falling out of the opening during installation. Equally space nails approximately 12" to 18" apart.

**NOTE:** Do not permanently attach weather seal to the jamb at this time.

**HEADROOM REQUIREMENT:** Headroom is defined as the space needed above the top of the door for tracks, springs, etc. to allow the door to open properly. If the door is to be motor operated, 2-1/2" (64 mm) of additional headroom is required.

**BACKROOM REQUIREMENT:** Backroom is defined as the distance needed from the opening back into the garage to allow the door to open fully.



### HEADROOM REQUIREMENT

TRACK TYPE	MIN. HEADROOM
15" Radius track	13-1/2" (343 mm)

### BACKROOM REQUIREMENT

DOOR HEIGHT	TRACK	MANUAL LIFT	MOTOR OPERATED
6'6" - 7'0"	15" Radius	98" (2489 mm)	125" (3175 mm)
7'3" - 8'0"	15" Radius	110" (2794 mm)	137" (3480 mm)

## Installation

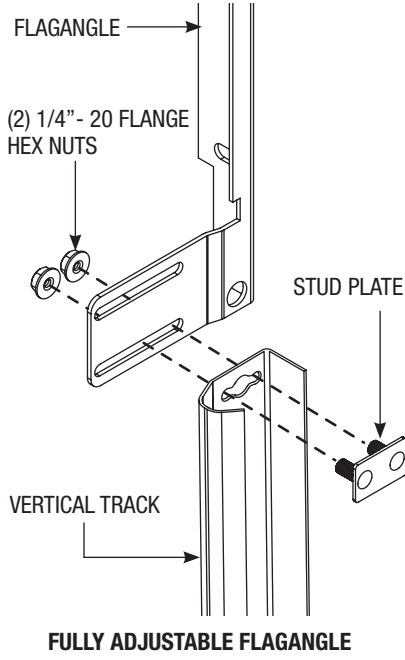
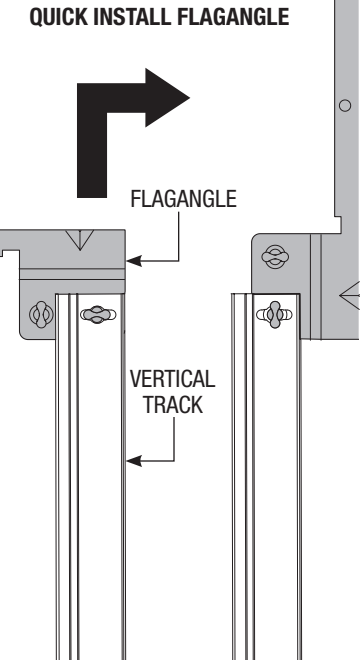
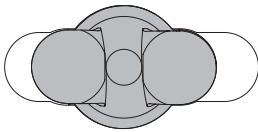
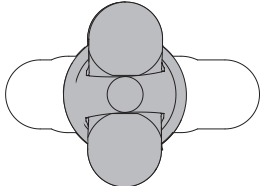
Begin the installation of the door by checking the opening. It must be the same size as the door. Vertical jambs must be plumb and the header level. Side clearance, from edge of door to wall, must be minimum of 3-1/2" (89mm) on each side.

**IMPORTANT:** STAINLESS STEEL OR PT 2000 COATED LAG SCREWS (NOT SUPPLIED) MUST BE USED WHEN INSTALLING CENTER BEARING BRACKETS, END BRACKETS, JAMB BRACKETS, OPERATOR MOUNTING/SUPPORT BRACKETS AND DISCONNECT BRACKETS ON TREATED LUMBER (PRESERVATIVE-TREATED). STAINLESS STEEL OR PT 2000 LAG SCREWS ARE NOT NECESSARY WHEN INSTALLING PRODUCTS ON UNTREATED LUMBER.

**NOTE:** It is recommended that 5/16" lag screws be pilot drilled using a 3/16" drill bit prior to fastening.

**IMPORTANT:** WHEN INSTALLING 5/16" DIAMETER LAG SCREWS USING AN ELECTRIC DRILL/DRIVER, THE DRILL/DRIVER'S CLUTCH MUST BE SET TO DELIVER NO MORE THAN 200 IN. LBS. OF TORQUE. FASTENER FAILURE COULD OCCUR AT A HIGHER SETTING.

**NOTE:** Insulated glass will cause the top section to be significantly heavier than the remaining sections. Wayne-Dalton attempts to balance the door at the top & bottom. To prevent any sudden door acceleration between the top & bottom, we recommend motor operating all glazed top doors. Doors with insulated glass top sections should not be manually operated.

1	Attaching Flagangles to Vertical Tracks		
<p>Tools Needed:</p> <p>None</p>	<p><b>If you have fully adjustable flagangles:</b> Hand tighten the flagangle to the vertical track using a stud plate and (2) 1/4" - 20 flange hex nuts. Repeat for other side.</p> <p>Secure the flange nuts after flagangle spacing is completed in Step 11.</p> <p><b>If you have quick install flagangles:</b> Place the lower quick install tab of the flagangle in the quick install feature of the vertical track. Give the flagangle 1/4 turn to lock in place. Repeat for other side.</p>	<p>QUICK INSTALL TAB UNLOCKED</p> 	<p>QUICK INSTALL TAB LOCKED</p> 

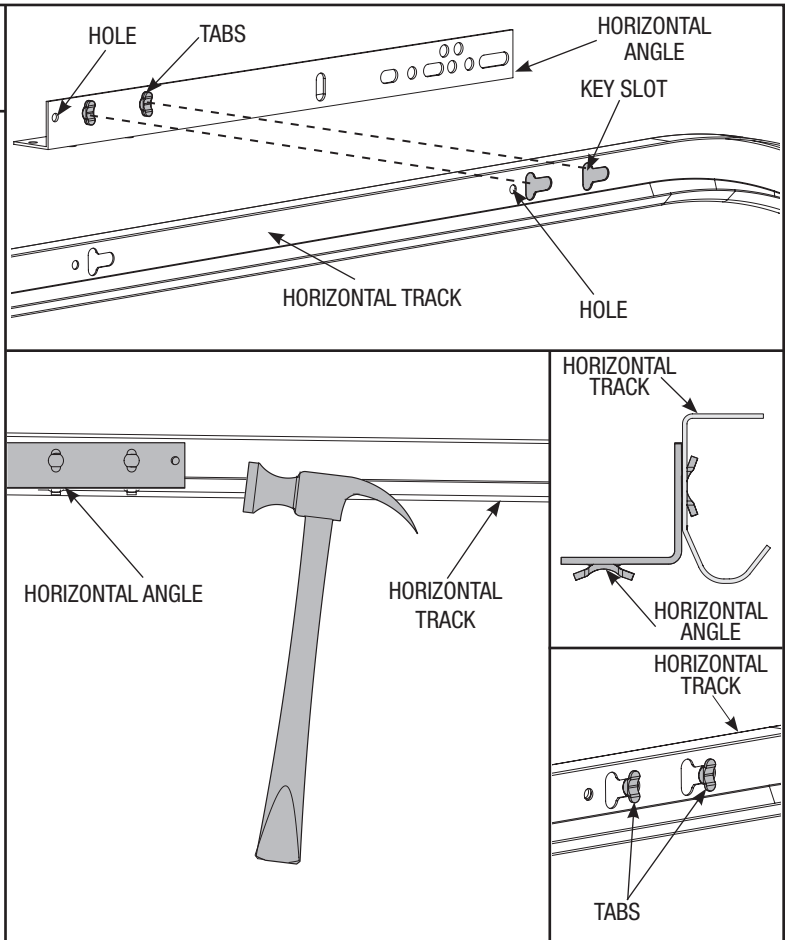
# 2

## Horizontal Angles

Tools Needed:  
Hammer

Position the horizontal angle as shown. Place tabs of horizontal angle in the key slot of horizontal track. Using a hammer, tap the horizontal angle towards the curved end of the track until the hole in track and angle are aligned. Set tracks aside.

**NOTE:** For larger doors, a full length horizontal angle may be spot welded to the horizontal track. If the horizontal angle is not welded, the full length horizontal angle will be installed as shown.

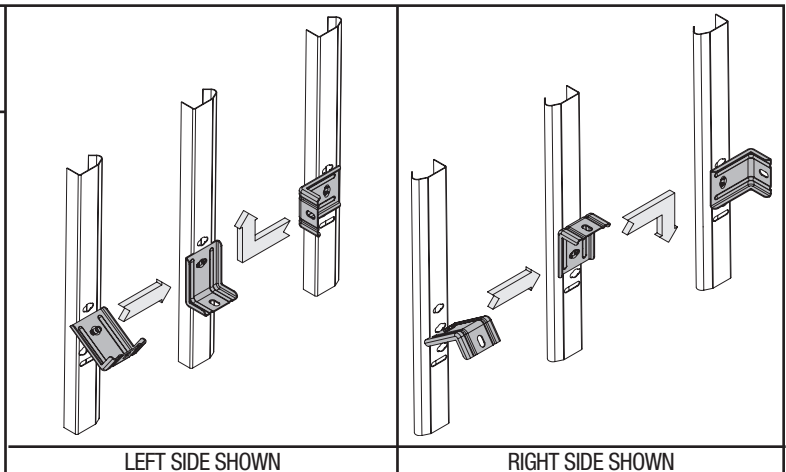


# 3

## Installing Jamb Brackets

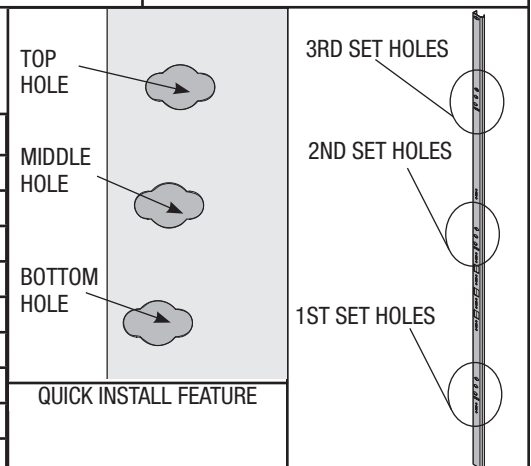
Tools Needed:  
None

Using the jamb bracket schedule, determine the placement of the jamb brackets for your door height and track type. To install the jamb brackets, align the twistlock tab on the quick install jamb bracket with the quick install feature in the track and turn the bracket perpendicular to the track so the mounting flange is toward the back (flat) leg of the track.



JAMB BRACKET SCHEDULE

DOOR HEIGHT	TRACK HEIGHT	1ST SET		2ND SET		3RD SET	
		JAMB BKT	POSITION	JAMB BKT	POSITION	JAMB BKT	POSITION
6'6"	70"(1778mm)	QJJB - 3	MIDDLE	QJJB - 5	BOTTOM	N/A	N/A
6'10"	74"(1880mm)	QJJB - 3	MIDDLE	QJJB - 5	BOTTOM	N/A	N/A
7'0"	76"(1930mm)	QJJB - 3	MIDDLE	QJJB - 5	BOTTOM	N/A	N/A
7'3"	79"(2007mm)	QJJB - 3	BOTTOM	QJJB - 5	BOTTOM	QJJB - 6	BOTTOM
7'6"	82"(2083mm)	QJJB - 3	BOTTOM	QJJB - 5	BOTTOM	QJJB - 6	BOTTOM
7'9"	85"(2159mm)	QJJB - 3	BOTTOM	QJJB - 5	BOTTOM	QJJB - 6	BOTTOM
8'0"	88"(2235mm)	QJJB - 3	MIDDLE	QJJB - 6	TOP	QJJB - 7	MIDDLE



# 4

## Drums

Tools Needed:  
None

**IMPORTANT:** RIGHT AND LEFT HAND IS ALWAYS DETERMINED FROM INSIDE THE BUILDING LOOKING OUT.

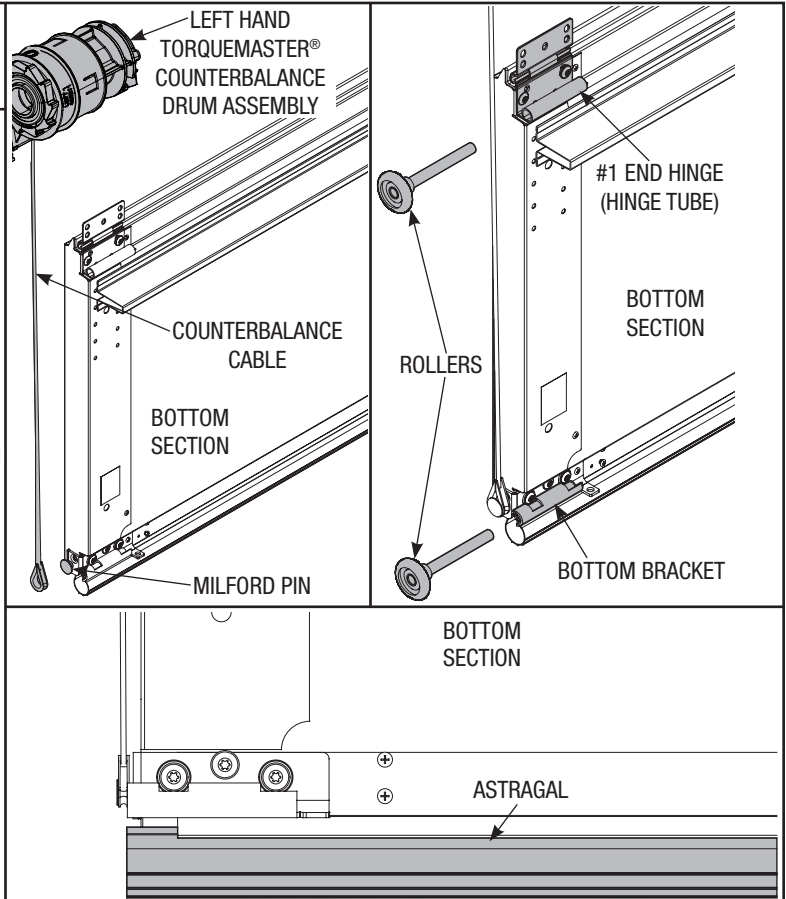
**NOTE:** For door section identification see page 4.

TorqueMaster® counterbalance drum assemblies, which consist of cable drums and drum wraps, are marked right and left hand. Uncoil the counterbalance cables and make sure you place the right hand cable loop on the right hand milford pin and place the left hand cable loop on the left hand milford pin. Check to ensure the cable loop fits tightly over the milford pin. Insert a roller into bottom bracket of the bottom section and insert another roller at #1 end hinge at the top of the bottom section. Repeat for other side.

### WARNING

FAILURE TO ENSURE TIGHT FIT OF CABLE LOOP OVER MILFORD PIN COULD RESULT IN CABLE COMING OFF THE PIN AND ALLOWING DOOR TO FALL, POSSIBLY RESULTING IN SEVERE OR FATAL INJURY.

**NOTE:** Verify astragal (bottom seal) is aligned with door section. If there is more than 1/2" excess astragal on either side, trim astragal even with door section.

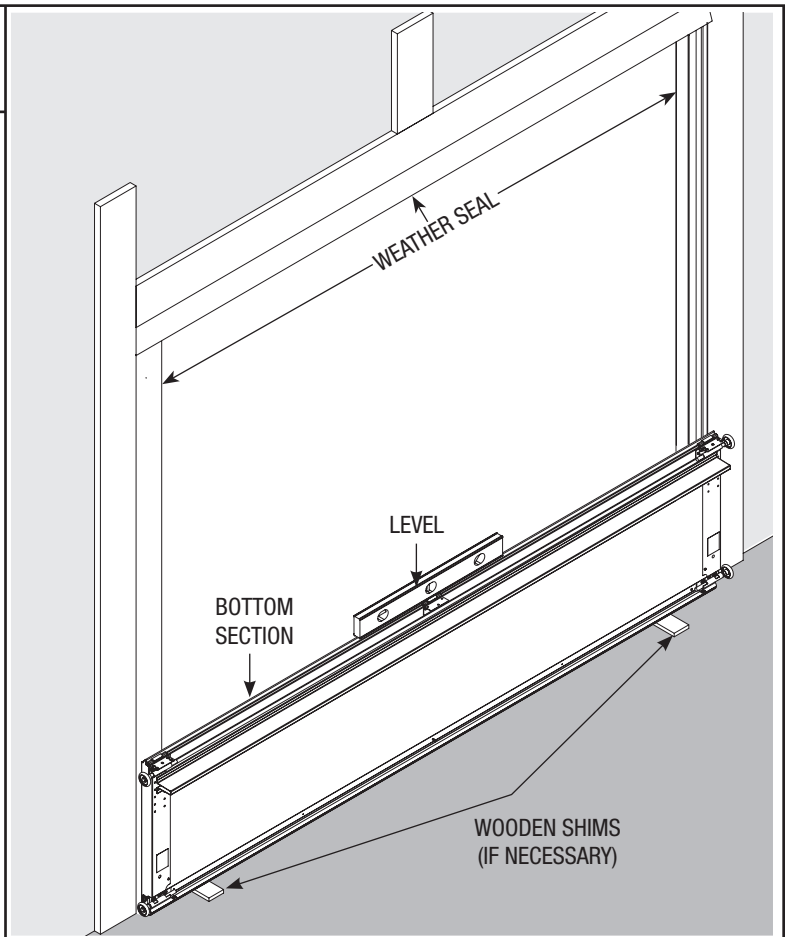


# 5

## Bottom Section

Tools Needed:  
Level

Center the bottom section in the door opening. Level section using wooden shims under the bottom astragal if necessary.



# 6

## Vertical Tracks

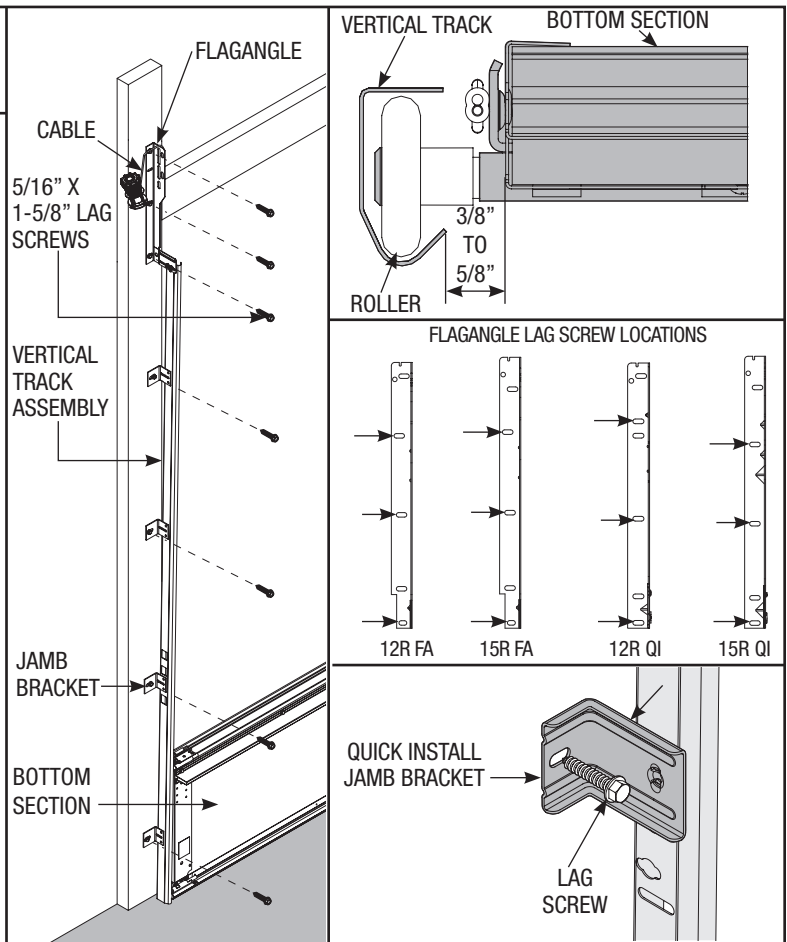
Tools Needed:  
3/16" Drill Bit  
Power Drill  
7/16" Socket Driver  
Tape Measure  
Level

**IMPORTANT:** THE TOPS OF THE VERTICAL TRACKS MUST BE LEVEL FROM SIDE TO SIDE. IF THE BOTTOM SECTION WAS SHIMMED TO LEVEL IT. THE VERTICAL TRACK ON THE SHIMMED SIDE, MUST BE RAISED THE HEIGHT OF THE SHIM.

Position the left hand vertical track assembly over the rollers of the bottom section. Make sure the counterbalance cable is located between the rollers and the door jamb. Drill 3/16" pilot holes for the lag screws. Loosely fasten jamb brackets and flagangles to the jamb using 5/16" x 1-5/8" lag screws.

Hang counterbalance cable over flagangle.

Repeat for the right side.



# 7

## Stacking Sections

Tools Needed:  
Power Drill  
7/16" Socket Driver

**NOTE:** For door section identification see page 4.

**NOTE:** Make sure hinges are flipped down, when stacking another section on top.

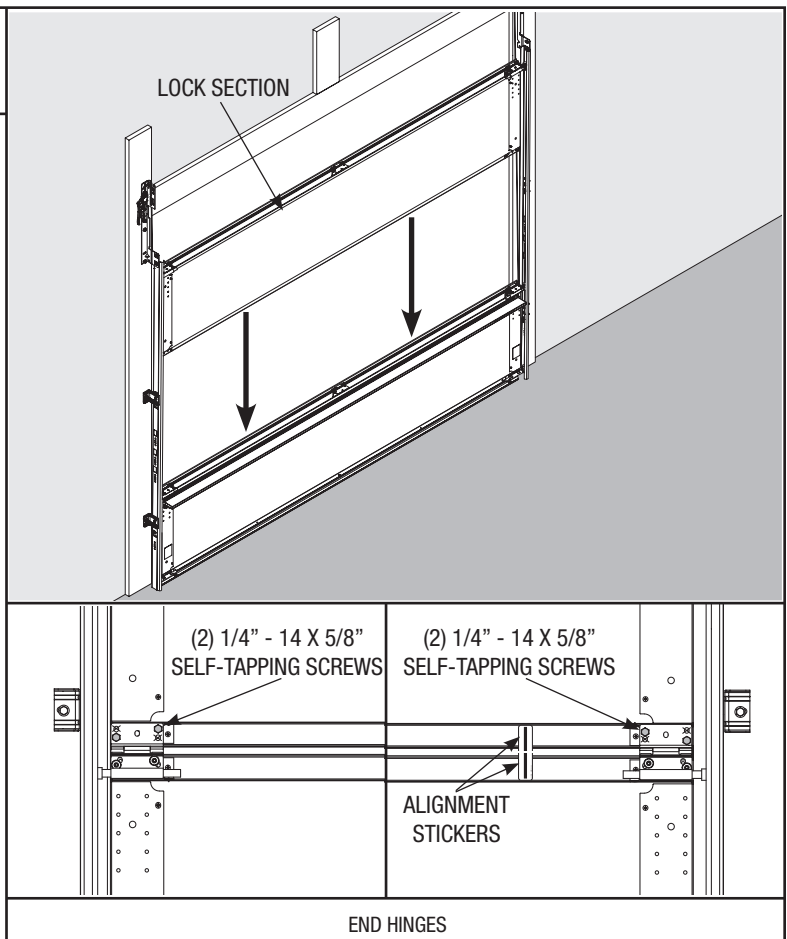
Place rollers in hinges tubes of the second section (lock section).

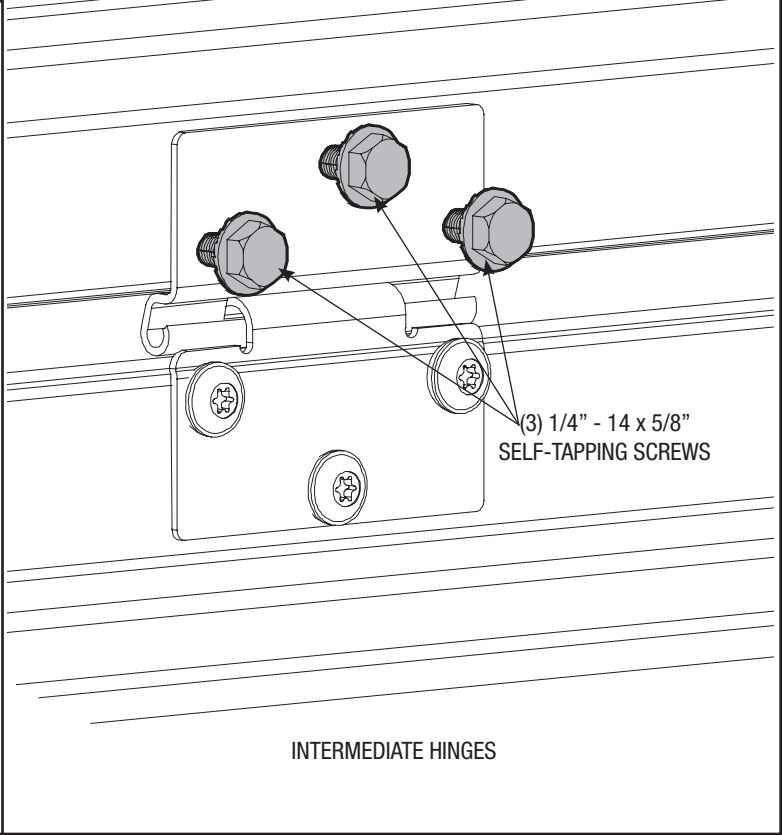
With assistance, lift second section and guide rollers into the vertical tracks.

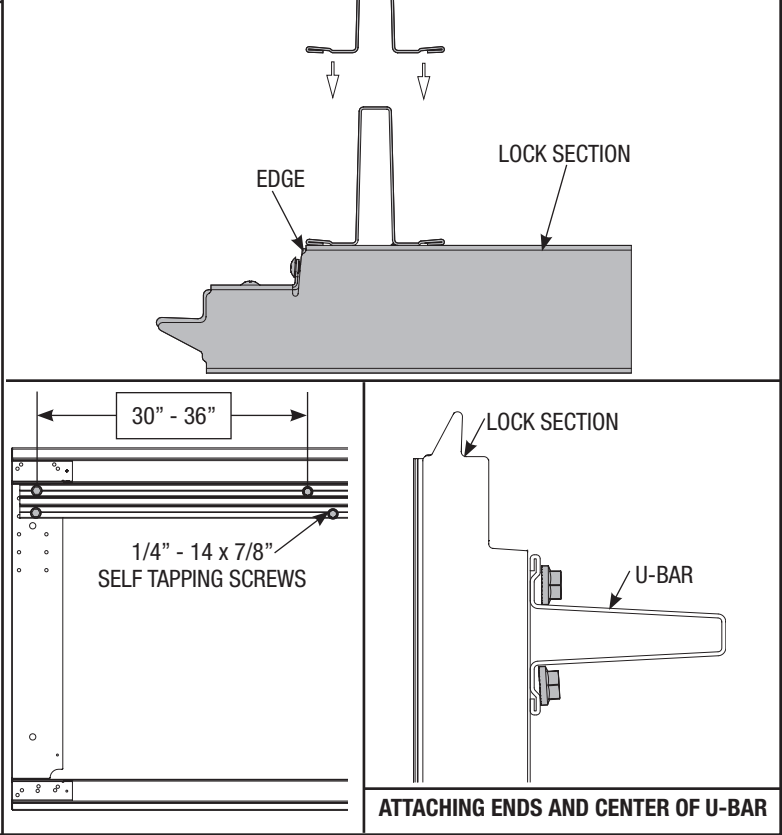
**NOTE:** Align vertical marks in the upper alignment sticker, with the lower alignment sticker on right hand side on the back of door. Verify that the stile patterns on your door sections are aligned on the outside of the door.

To connect sections, keep sections aligned and fasten center hinges first and end hinges last using 1/4" - 14 x 5/8" self-tapping screws.

Repeat for other section(s) except top section.



	Stacking Sections - Continued	
		 <p>(3) 1/4" - 14 x 5/8" SELF-TAPPING SCREWS</p> <p>INTERMEDIATE HINGES</p>

8	U-Bar	
<p>Tools Needed:</p> <p>Power Drill</p> <p>7/16" Socket Driver</p> <p>Tape Measure</p>	<p><b>NOTE:</b> For door section identification see page 4.</p> <p><b>NOTE:</b> 18'-0" wide by 8'-0" high doors will be supplied with one u-bar for the lock section.</p> <p>Center the u-bar on top edge of lock section and flush with edge of section. Fasten each end of the u-bar to the endcap with 1/4" - 14 x 7/8" self tapping screws at 30" - 36" inches (762 mm - 914 mm) intervals across the section.</p>	 <p>U-BAR</p> <p>EDGE</p> <p>LOCK SECTION</p> <p>30" - 36"</p> <p>1/4" - 14 x 7/8" SELF TAPPING SCREWS</p> <p>LOCK SECTION</p> <p>U-BAR</p> <p>ATTACHING ENDS AND CENTER OF U-BAR</p>



# 9

## Operator Bracket

Tools Needed:  
Power Drill  
7/16" Socket  
Driver  
Tape Measure

**IMPORTANT:** WHEN CONNECTING A TROLLEY TYPE GARAGE DOOR OPENER TO THIS DOOR, A WAYNE-DALTON OPENER/TROLLEY BRACKET MUST BE SECURELY ATTACHED TO THE TOP SECTION OF THE DOOR, ALONG WITH ANY U-BARS PROVIDED WITH THE DOOR. THE INSTALLATION OF THE OPENER MUST BE ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND FORCE SETTINGS MUST BE ADJUSTED PROPERLY.

**NOTE:** For retro fit applications, the operator bracket must be aligned with an existing operator.

### If no u-bar is installed:

Locate the center of the top section and attach the operator bracket as shown in the illustration using (6) 1/4" - 20 x 11/16" self drilling screws.

**NOTE:** Prior to fastening operator bracket to top section, ensure the top edge of operator bracket is aligned with the top edge of the section as shown on far right

### If u-bar is installed:

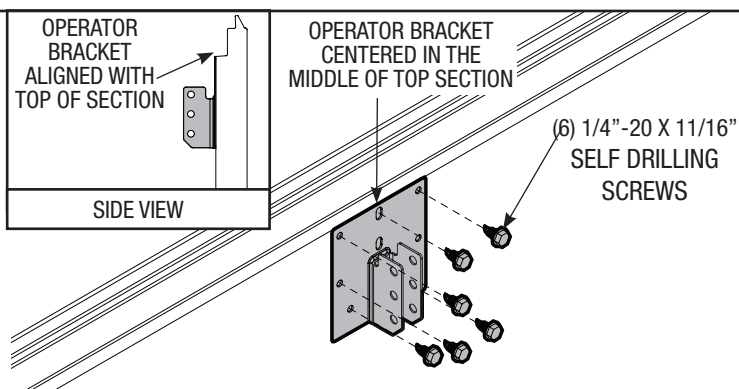
Remove, but retain (4-6) 1/4"-14 x 7/8" self drilling screws from the center of the u-bar, allowing the operator bracket to slide between the section and the u-bar.

Locate the center of the top section and slide operator bracket under u-bar till the operator bracket is seated against the u-bar flange.

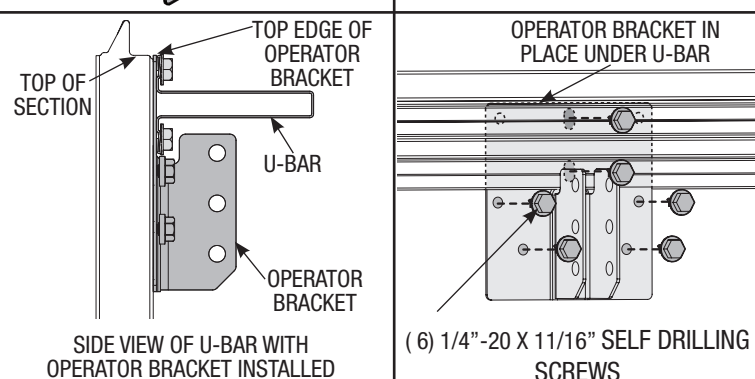
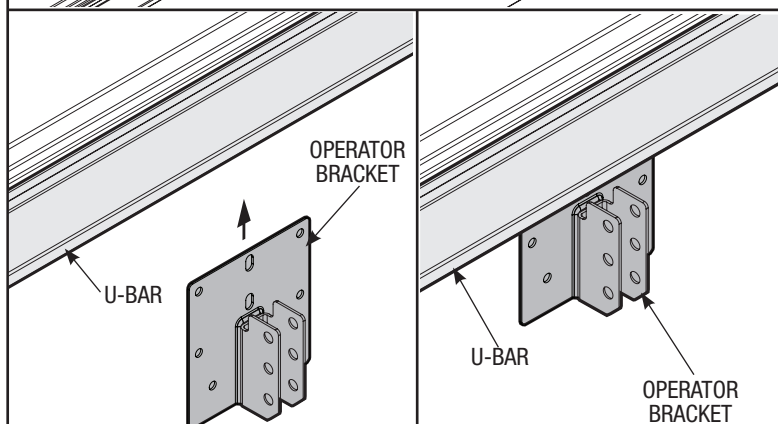
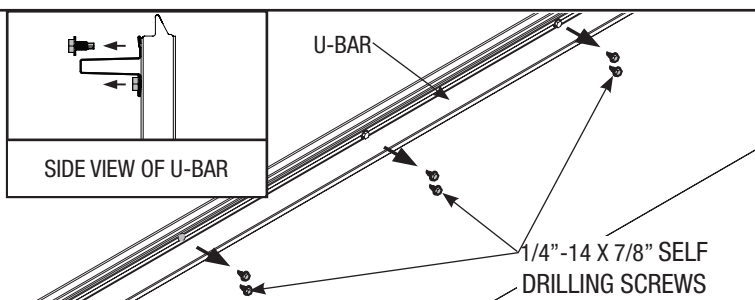
**NOTE:** Prior to fastening operator bracket to top section, ensure the top edge of operator bracket is aligned with the top edge of the section as shown on far right.

Attach the operator bracket using (6) 1/4" - 20 x 11/16" self drilling screws (as shown). Finish re-attaching the u-bar using the self tapping screws removed previously.

### IF NO U-BAR IS INSTALLED



### IF U-BAR IS INSTALLED



# 10

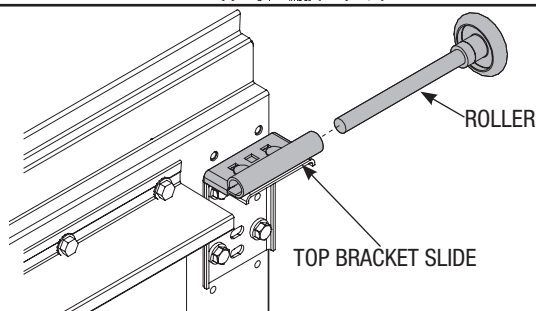
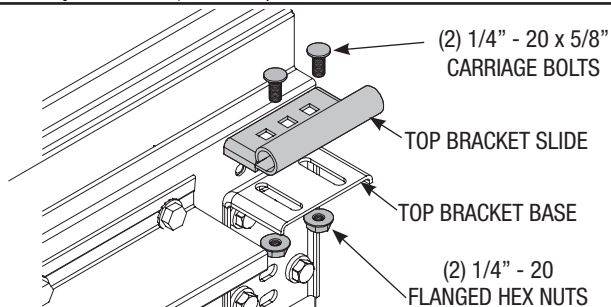
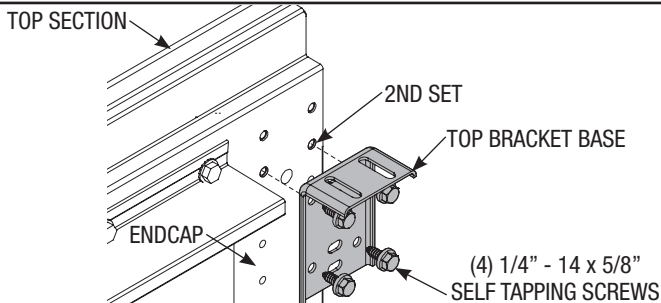
## Top Brackets

Tools Needed:  
Power Drill  
7/16" Socket  
Driver

**NOTE:** For door section identification see page 4.

To install the L-shaped top brackets, align the top holes in the top bracket base with the second set of holes in the endcap.

Fasten top bracket base to endcap using (4) 1/4" - 14 x 5/8" self tapping screws. Secure the top bracket slide to the bracket base loosely using (2) 1/4" - 20 x 5/8" carriage bolts and (2) 1/4" - 20 flanged hex nuts. The bracket will be tightened and adjusted in step 13. Insert rollers into top bracket slide. Repeat for other side.



## Top Section

Tools Needed:  
Hammer  
Tape Measure  
Step Ladder

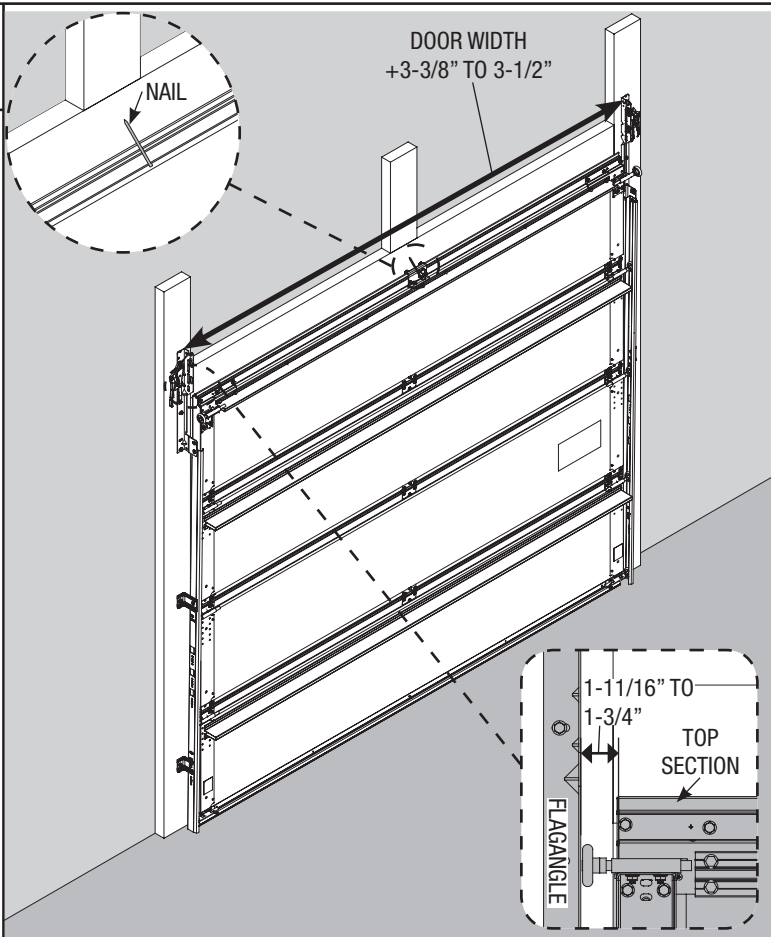
Place the top section in the opening and vertically align with lower sections with the aid of the alignment stickers as shown in step 7.

**IMPORTANT:** VERIFY ALIGNMENT FROM THE FRONT SIDE OF DOOR, PRIOR TO SECURING HINGES. IF ALIGNMENT IS NEEDED, ALIGN VERTICAL MARKS IN THE UPPER VERTICAL MARKS IN THE UPPER ALIGNMENT STICKER WITH THE LOWER ALIGNMENT STICKER ON RIGHT HAND SIDE ON THE BACK OF DOOR.

Temporarily secure the top section by driving a nail into the header near the center of the door and bending it over the top section. Now flip up hinge leaf, hold tight against section, and fasten center hinges first, and end hinges last. (Refer to Step 7). Position flagangle between 1-11/16" (43 mm) to 1-3/4" (44 mm) from the edge of the door. Flagangles must be parallel to the door sections.

Now complete the vertical track installation on both sides by securing the center jamb bracket and tightening the nuts to the stud plate for fully adjustable flagangles in step 1, and tightening the other lag screws from step 6.

**IMPORTANT:** THE DIMENSION BETWEEN THE FLAGANGLES MUST BE DOOR-WIDTH PLUS 3-3/8" (86MM) TO 3-1/2" (89 MM) FOR SMOOTH, SAFE DOOR OPERATION.



# 12

## Attaching Horizontal Tracks to Flagangles

Tools Needed:  
9/16" Socket  
7/16" Socket  
Ratchet Wrench  
9/16" Wrench  
Level  
Step Ladder

### If you have fully adjustable flagangles:

To install horizontal track, place the curved end over the top roller. Align the bottom of the horizontal track with the vertical track. Hand tighten the horizontal track to the flagangle with (2) 1/4"-20 x 9/16" track bolts and (2) 1/4" - 20 flange hex nuts. Repeat for other side.

### **WARNING**

**DO NOT RAISE DOOR UNTIL HORIZONTAL TRACKS ARE SECURED AT REAR, AS OUTLINED IN STEP 23, OR DOOR COULD FALL FROM OVERHEAD POSITION CAUSING SEVERE OR FATAL INJURY.**

Level the horizontal track assembly and bolt the horizontal angle to the slot in the flagangle using (1) 3/8" - 16 x 3/4" truss head bolt and (1) 3/8" - 16 hex nut. Repeat for other side.

**NOTE:** If an *i*drive® opener will be installed, position horizontal tracks slightly above level.

Remove the nail that was temporarily holding the top section in place, installed in Step 11.

**IMPORTANT:** FAILURE TO REMOVE NAIL BEFORE ATTEMPTING TO RAISE DOOR COULD CAUSE PERMANENT DAMAGE TO TOP SECTION.

### If you have quick install flagangles:

Align key slot of the horizontal track with the quick install tab of the flagangle. Push curved portion of horizontal track down to lock in place.

### **WARNING**

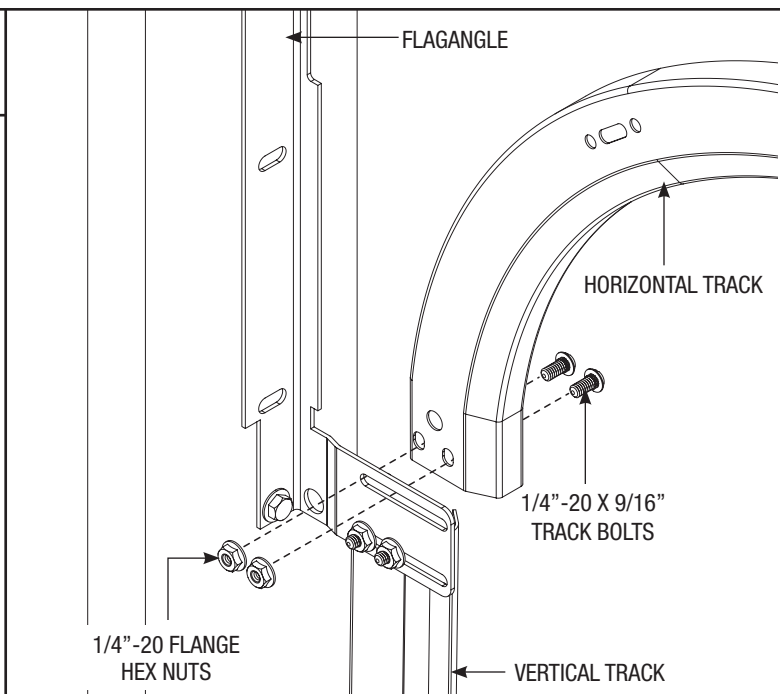
**DO NOT RAISE DOOR UNTIL HORIZONTAL TRACKS ARE SECURED AT REAR, AS OUTLINED IN STEP 23, OR DOOR COULD FALL FROM OVERHEAD POSITION CAUSING SEVERE OR FATAL INJURY.**

Level the horizontal track assembly and bolt the horizontal angle to the slot in the flagangle using (1) 3/8" - 16 x 3/4" truss head bolt and (1) 3/8" - 16 hex nut. Repeat for other side.

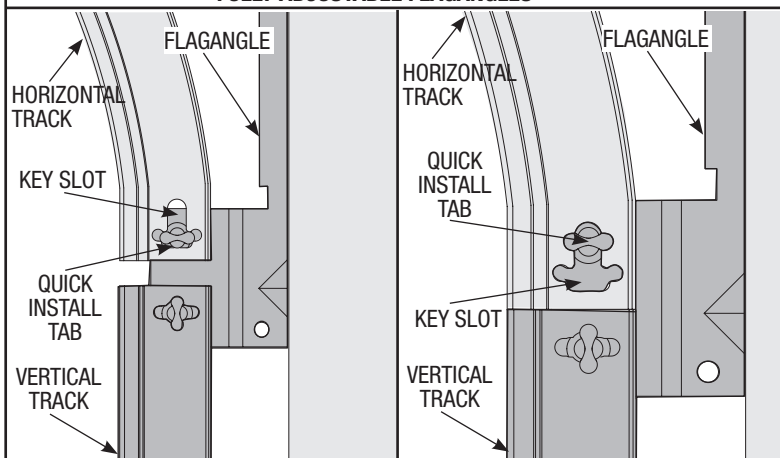
**NOTE:** If an *i*drive® opener will be installed, position horizontal tracks slightly above level.

Remove the nail that was temporarily holding the top section in place, installed in Step 11.

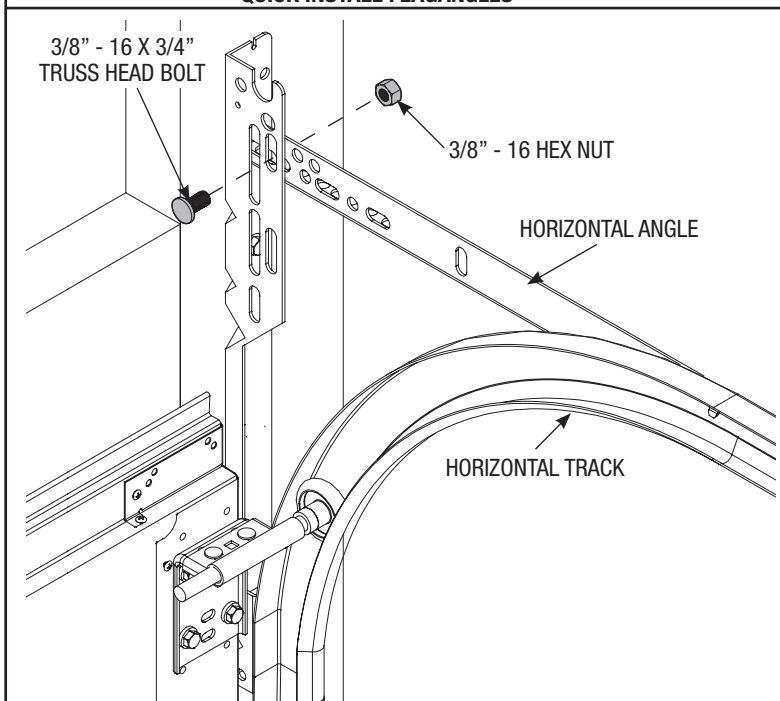
**IMPORTANT:** FAILURE TO REMOVE NAIL BEFORE ATTEMPTING TO RAISE DOOR COULD CAUSE PERMANENT DAMAGE TO TOP SECTION.



FULLY ADJUSTABLE FLAGANGLES



QUICK INSTALL FLAGANGLES



# 13

## Adjusting Top Brackets

Tools Needed:  
7/16" Wrench  
Step Ladder

With horizontal tracks installed, you can now adjust the top brackets.

Vertically align the top section of the door with the lower sections. Once aligned, position the top bracket slide, out against the horizontal track.

Maintaining the slide's position, tighten the (2) 1/4" - 20 flanged hex nuts to secure the top roller slide to the top bracket base.

TOP SECTION

CORRECT

TOP SECTION

INCORRECT

(2) 1/4" - 20  
FLANGED HEX  
NUTS

TOP SECTION

HORIZONTAL  
TRACK

TOP BRACKET  
SLIDE

# 14

## TorqueMaster® Spring Tube

Tools Needed:  
None

TorqueMaster® springs come lubricated and pre-assembled inside the TorqueMaster® spring tube.

To install, lay the TorqueMaster® spring tube on the floor (inside garage) in front of the door with the labeled end to the left.

TORQUEMASTER®  
SPRING TUBE

LABELED END

# 15

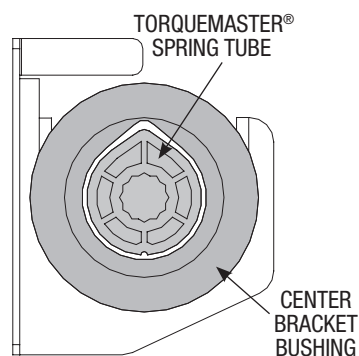
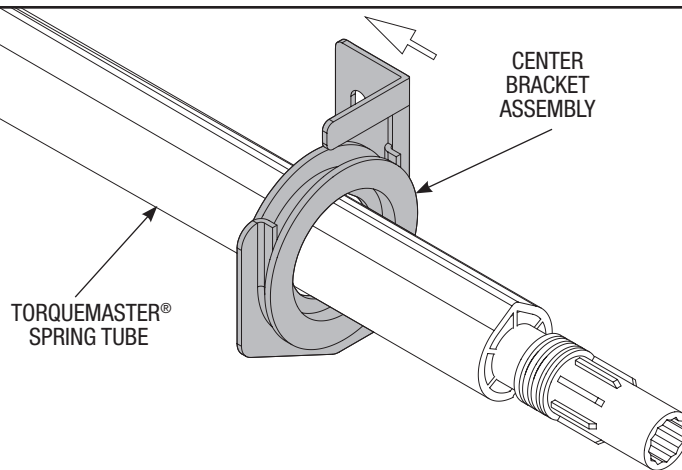
## Center Bracket Bushing

Tools Needed:  
None  
Step Ladder

**NOTE:** If you are installing the idrive® opener with your garage door, skip this step and go to your idrive® Installation Instructions and Owner's Manual. After completing steps 1-13 of your idrive® Installation Instructions and Owner's Manual, rear supports will need to be fabricated/installed to support both horizontal tracks, see step 27.

**NOTE:** If you are not installing the idrive® opener on your garage door, you must install the center bracket bushing assembly.

Being cam shaped the center bracket bushing only fits one way. Slide the center bracket assembly towards the center of the TorqueMaster® spring tube, from the right side as shown.



# 16

## Cable Drums/ Drum Wraps

Tools Needed:  
Tape Measure  
Step Ladder

Shake the TorqueMaster® Plus spring tube assembly gently to extend the winding shafts out about 5" on each side. For single spring applications, there will be no left hand spring in the TorqueMaster® Plus spring tube assembly.

Lift the TorqueMaster® Plus spring tube assembly and rest it on the top of the flagangles.

**NOTE:** Cable drum assemblies are marked right and left hand. Cable drums and TorqueMaster® Plus spring tube assembly are cam shaped to fit together only one way.

Starting on the right hand side, slide the drum wrap over to secure the counterbalance cables. Pre-wrap the Torquemaster® Plus cable drum with the counter balance cable 1-1/2 wraps as shown.

To install the cable drum, slide cable drum over the winding shaft until the cable drum seats against the TorqueMaster® Plus spring tube assembly.

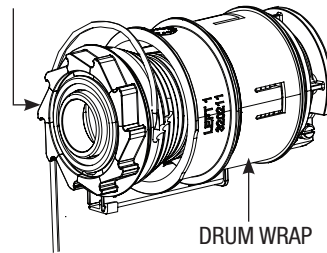
The winding shaft must extend past the cable drum far enough to expose the splines and the groove. Align the winding shaft groove with the round notch in the flagangle.

**For double spring applications,** repeat for opposite side.

**For single spring applications,** pre-wrap the left hand cable drum with counterbalance cable 1-1/2 wraps and insert the loose winding shaft into the cable drum prior to sliding the cable drum over the TorqueMaster® spring tube assembly.

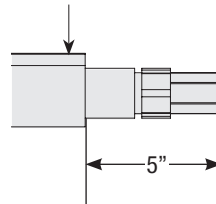
**NOTE:** On single spring applications, take care in handling the loose winding shaft (left side) so that it does not slide back into the TorqueMaster® Plus spring tube assembly.

CABLE DRUM

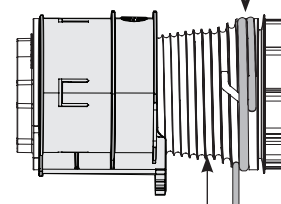


DRUMS COME WITH DRUM WRAPS PRE-INSTALLED ON THEM.

TORQUEMASTER®  
SPRING TUBE ASSEMBLY

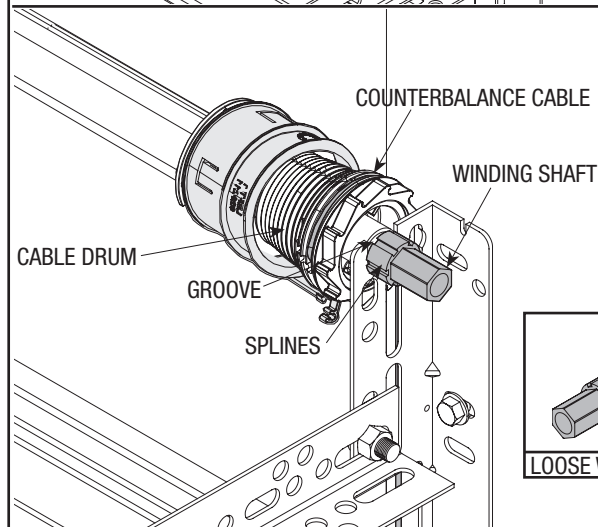
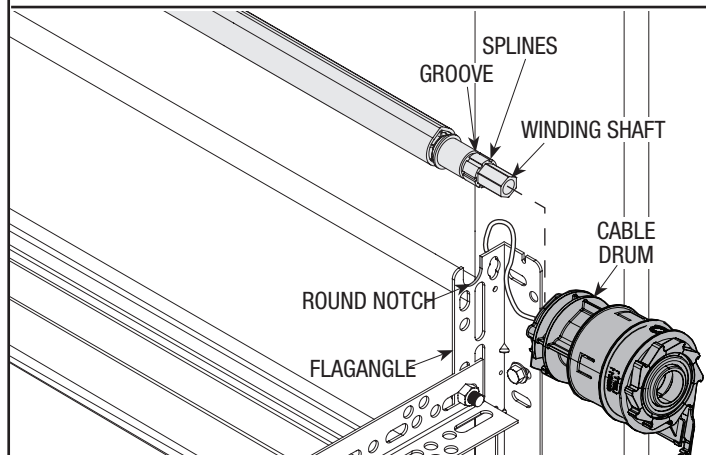


COUNTERBALANCE CABLE



RIGHT DRUM

**1-1/2 Wraps**





# 17

## End Brackets

### Tools Needed:

Power Drill

7/16" Wrench

7/16" Socket Driver

Step Ladder

**IMPORTANT:** WARNING TAGS MUST BE SECURELY ATTACHED TO BOTH END BRACKETS.

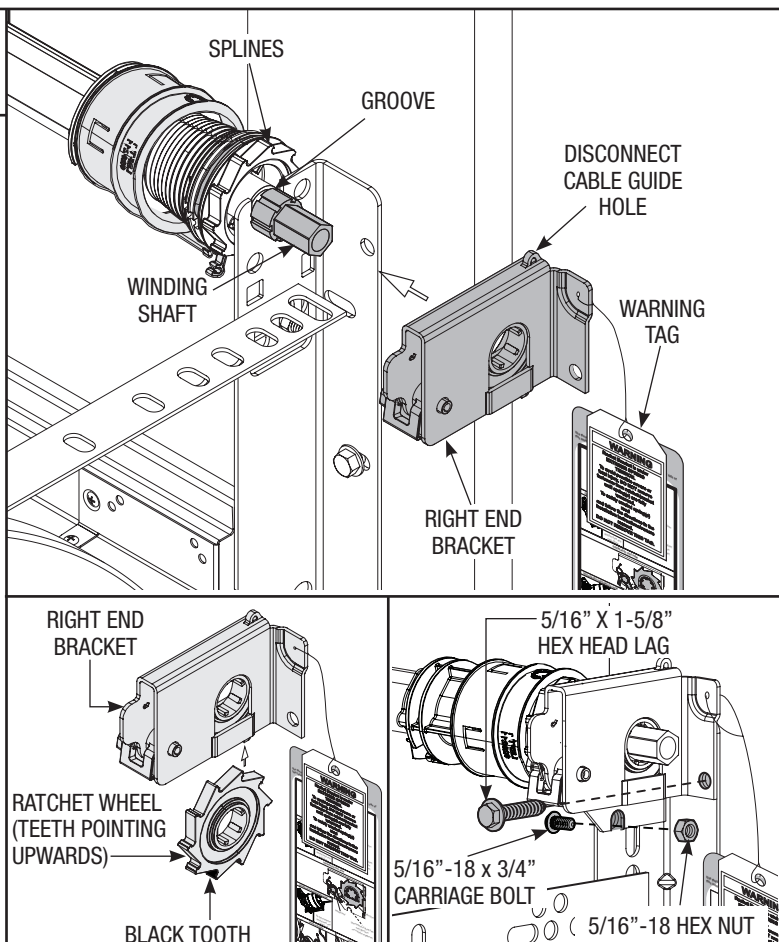
End brackets are right and left hand. You can identify the right hand end bracket by the disconnect cable guide hole in the top of the bracket.

Beginning with the right hand side, slide the end bracket onto the winding shaft so that the grooves in the ratchet wheel fit onto the winding shaft splines.

Attach the end bracket to the flag angle using (1) 5/16"-18 x 3/4" carriage bolt and nut; then secure it to the jamb using (1) 5/16" x 1-5/8" lag screw.

Repeat for left hand end bracket.

**Note:** On single spring applications, no ratchet wheel is required on the left side.



# 18

## Securing Center Bracket Assembly

### Tools Needed:

Power Drill

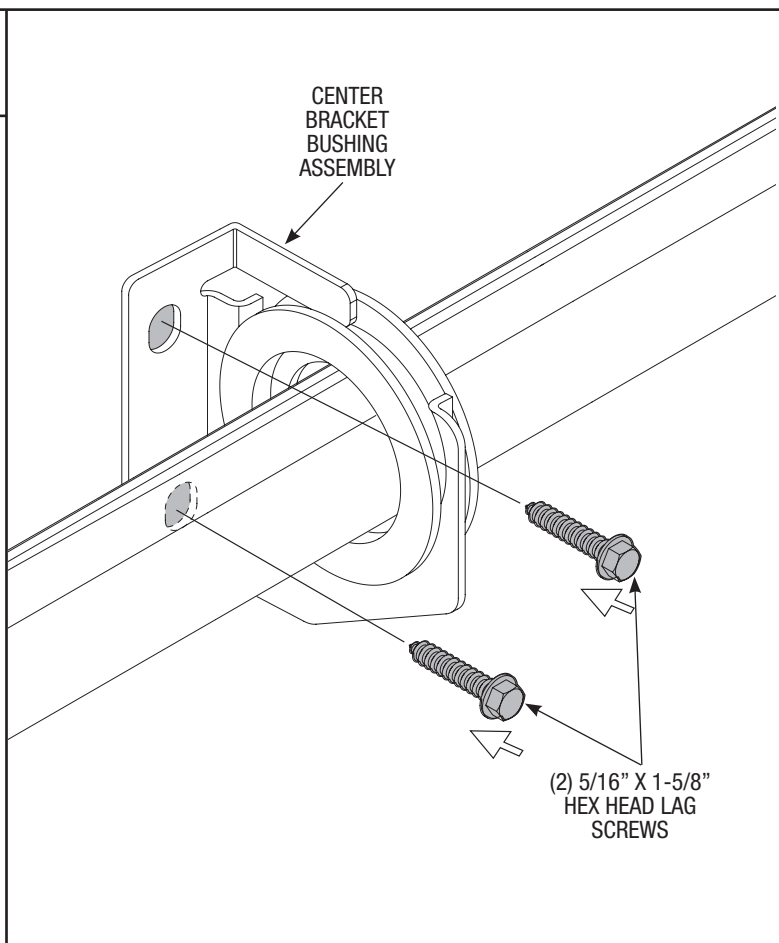
3/16" Drill Bit

7/16" Socket Driver

Step Ladder

**NOTE:** If you are not installing the *i*drive® opener on your garage door, you must install the center bracket bushing assembly, follow these instructions.

To locate the center bracket, mark the header halfway between the flagangles and level the TorqueMaster® spring tube. Drill 3/16" pilot holes into header for the lag screws. Fasten the metal bracket to the header using (2) 5/16" X 1-5/8" lag screws.





# 19

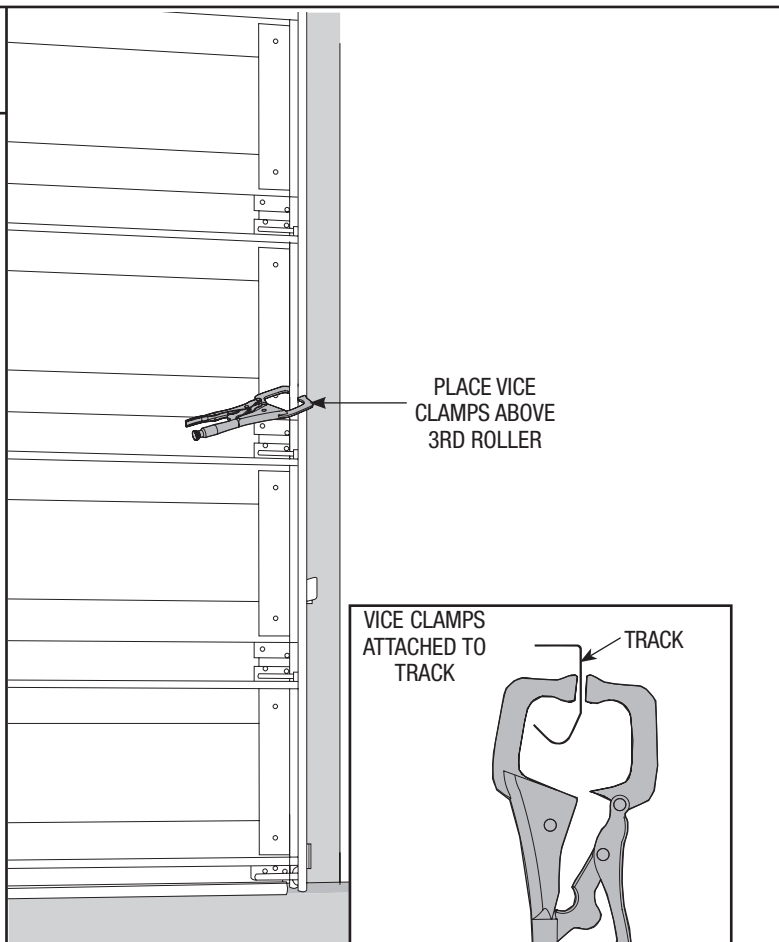
## Securing Door for Spring Winding

Tools Needed:  
(2) Vice Clamps

Place vice clamps onto both vertical tracks just above the third Roller. This is to prevent the garage door from raising while winding torsion spring(s).

### **WARNING**

FAILURE TO PLACE VICE CLAMPS ONTO VERTICAL TRACK CAN ALLOW DOOR TO RAISE AND CAUSE SEVERE OR FATAL INJURY.



# 20

## Cable Adjustment

Tools Needed:  
Vice Grips  
Pliers/Wire Cutters  
Flat Tip Screwdriver  
Step Ladder

Starting on the right side, adjust the cable drum assembly by rotating the drum until the set screw faces directly away from the header. Torque tube cam peak should be pointing straight up.

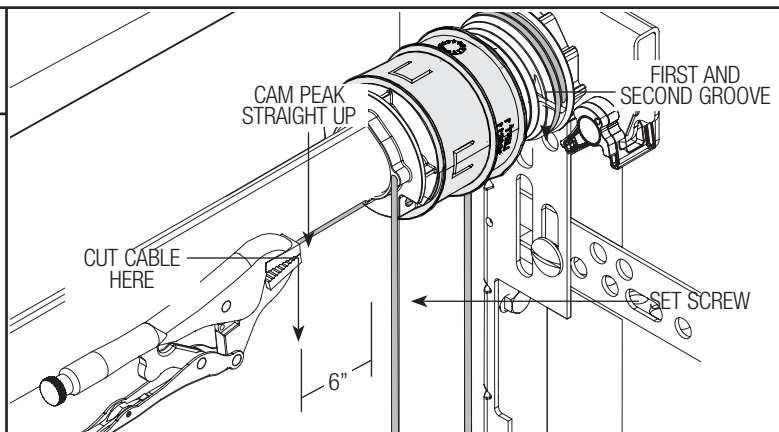
Loosen the set screw no more than 1/2 turn. Ensure counterbalance cable is aligned and seated in the first and second grooves and pull on the end of the counterbalance cable to remove all cable slack.

Snug the set screw, and then tighten an additional 1-1/2 turns. Measure approximately 6" of cable and cut off excess cable. Insert end of cable in hole of cable drum.

Repeat for left hand cable drum assembly.

**IMPORTANT:** ENSURE THE CABLE IS ALIGNED AND SEATED IN THE FIRST AND SECOND GROOVES OF THE CABLE DRUM PRIOR TO WINDING SPRINGS.

**NOTE:** This illustration shows the right hand TorqueMaster® Plus cable drum assembly, left hand cable drum assembly is symmetrically opposite.



## Winding Springs

Tools Needed:  
Ratchet Wrench  
5/8" Socket  
3" Extension  
Gloves  
Step Ladder

### **⚠ WARNING**

IT IS RECOMMENDED THAT LEATHER GLOVES BE WORN WHILE WINDING THE TORQUEMASTER® PLUS SPRINGS. FAILURE TO WEAR GLOVES MAY CAUSE INJURY TO HANDS.

Double check to ensure the counterbalance cable is aligned in the first and second groove of the cable drum (Step 20).

There are two methods for counting the spring turns as you wind. One method is to identify the black tooth on the ratchet wheel inside of the end bracket. When the wheel makes one revolution and the tooth returns to its starting point, one turn has been made. The other method is to make a mark on the winding shaft (or socket) and end bracket, and count your turns in this manner.

### **⚠ WARNING**

PRIOR TO WINDING OR MAKING ADJUSTMENTS TO THE SPRINGS, ENSURE YOU'RE WINDING IN THE PROPER DIRECTION AS STATED IN THE INSTALLATION INSTRUCTIONS. OTHERWISE THE SPRING FITTINGS MAY RELEASE FROM SPRING IF NOT WOUND IN THE PROPER DIRECTION AND COULD RESULT IN SEVERE OR FATAL INJURY.

Starting on the right hand side. Turn the pawl knob on the end bracket to the upper position. Using a ratchet wrench with a 16mm 5/8" socket (**NOTE:** A 76 mm 3" extension is also recommended for added clearance from the horizontal angle.), wind the spring by rotating the winding shaft **counter clockwise**, while watching either the black tooth on the ratchet wheel or the mark on the winding shaft.

**IMPORTANT:** PAWL KNOB MUST BE IN UPPER POSITION TO ADD/ REMOVE REQUIRED NUMBER OF SPRING TURNS.

After 2-3 turns, remove the ratchet wrench and adjust the cable on the left side. Ensure the cables are in the first and second groove of the cable drums, as shown in Step 20.

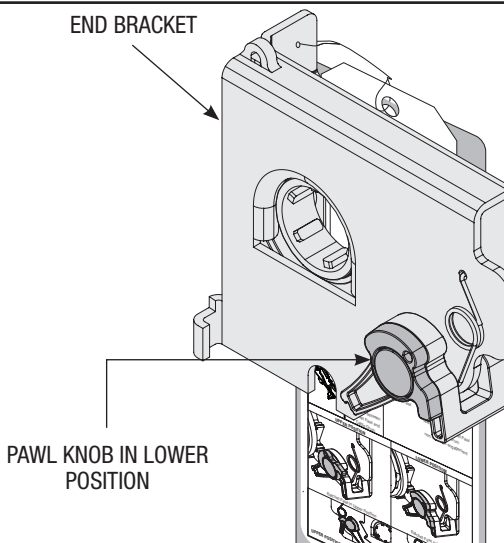
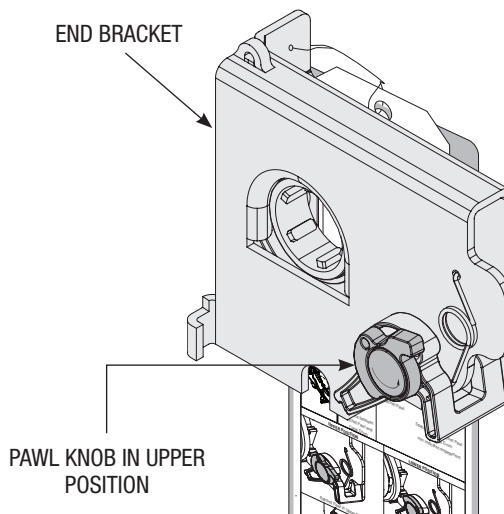
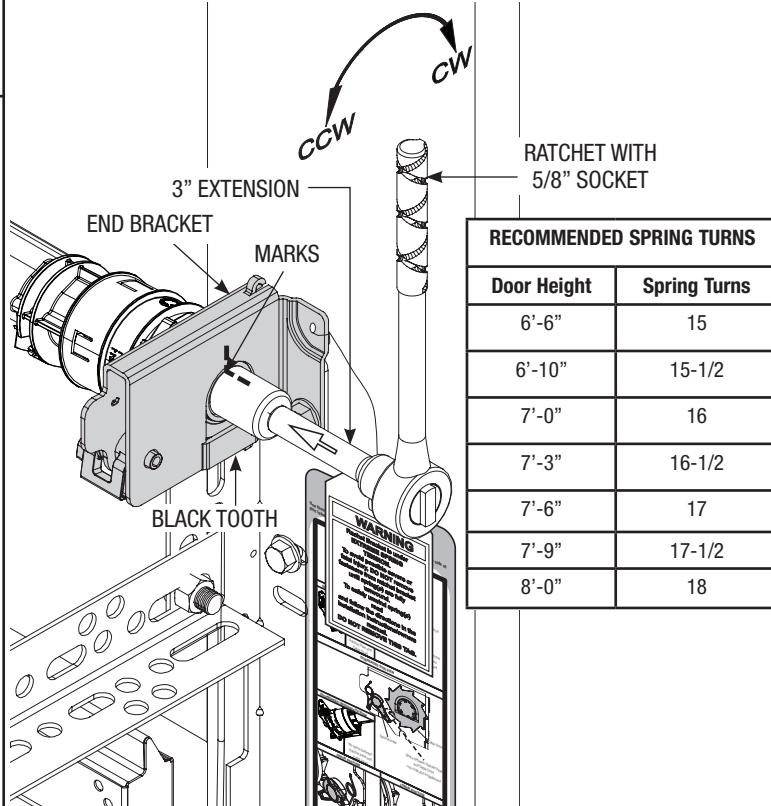
**NOTE:** Single spring application require no spring winding on the left hand side, but cable tension needs to be adjusted.

**IMPORTANT:** COUNTERBALANCE CABLE TENSION MUST BE EQUAL ON BOTH SIDES PRIOR TO FULLY WINDING SPRINGS.

**SEE THE SPRING TURN CHART FOR THE REQUIRED NUMBER OF TURNS:**

**For single spring applications:**

Return to the right hand and continue winding the spring to the required number of turns for your door. Place pawl knob in lower position.



## Winding Springs Continued...

### For double spring applications:

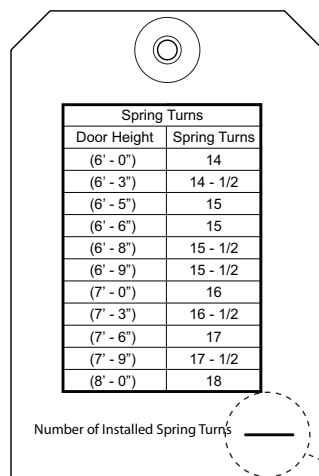
Either use the black tooth on the ratchet wheel for winding or place a mark on the winding shaft and end bracket. Place the ratchet with 5/8" socket onto the left hand winding shaft end. To wind the spring, rotate the winding shaft clockwise, while watching the black tooth on the ratchet wheel or the mark on the winding shaft. Rotate the winding shaft to the required number of turns for your door. Then return to the right hand side and wind the right hand spring to the required number of turns. Place pawl knob in lower position on both sides.

**IMPORTANT:** Mark number of spring turns on TorqueMaster® Plus end bracket warning tag.

**NOTE:** Since total turns to balance door can deviate from SPRING TURN CHART values by  $\pm 1/2$  turn, adjustments to the recommended number of turns may be required AFTER rear hangers assembly is completed.

**IMPORTANT!** HOLD THE DOOR DOWN TO PREVENT IT FROM RISING UNEXPECTEDLY IN THE EVENT THE SPRING WAS OVERWOUND AND CAUTIOUSLY REMOVE VICE CLAMPS FROM VERTICAL TRACKS.

### BACK OF TORQUEMASTER® PLUS END BRACKET WARNING TAG



LOCATION FOR MARKING NUMBER OF INSTALLED SPRING TURNS

# 22

## Securing Drum Wraps

Tools Needed:  
Step Ladder

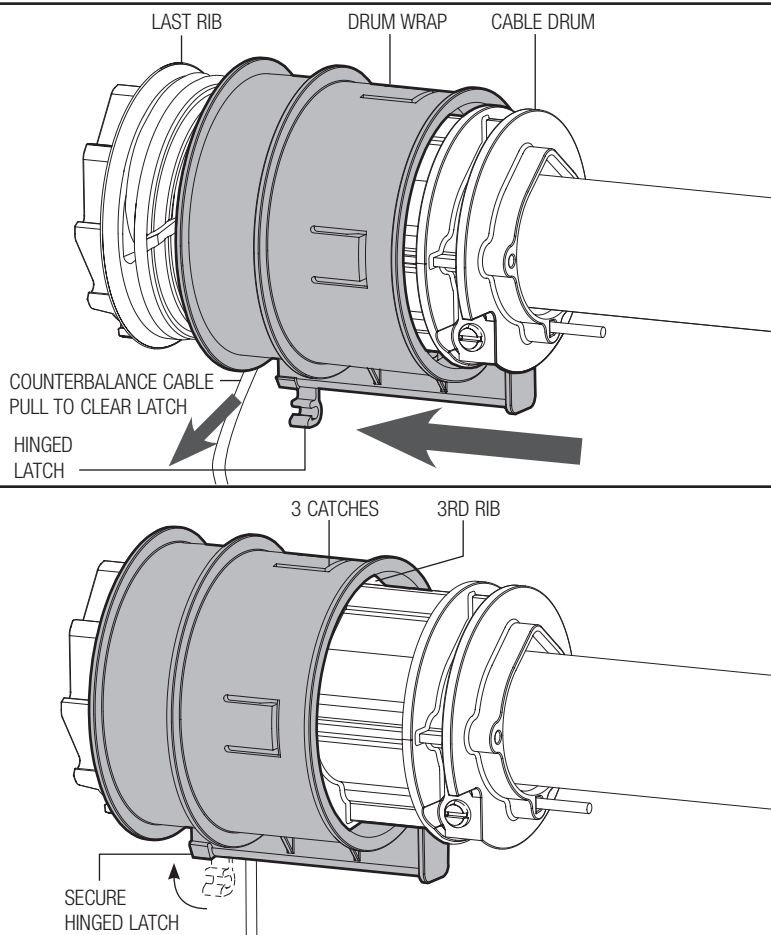
Un-snap the drum wrap hinged latch and rotate down.

**IMPORTANT:** PULL THE COUNTERBALANCE CABLE AWAY FROM THE HEADER TO CLEAR THE LATCH. SIMULTANEOUSLY SLIDE THE DRUM WRAP AGAINST THE LAST RIB UNTIL THE THREE CATCHES ENGAGE THE 3RD RIB.

Re-engage the hinge latch by rotating upward until a distinct snap is felt.

Confirm the catch is fully engaged by lightly tugging on it.

Repeat for the left hand side.



## Rear Support

## Tools Needed:

Ratchet Wrench

1/2" Socket

1/2" Wrench

(2) Vice Clamps

Tape Measure

Level

Hammer

Raise the door until the top section and half of the next section are in a horizontal position. Do not raise door any further since rear of horizontal track is not yet supported.

**⚠ WARNING**

**RAISING DOOR FURTHER CAN RESULT IN DOOR FALLING AND CAUSE SEVERE OR FATAL INJURY.**

Clamp a pair of vice clamps on the vertical tracks just above the second roller on one side, just below the second roller on the other side. This will prevent the door from raising or lowering while installing the rear support.

Using perforated angle, (2) 5/16"-1 - 5/8" hex head lag screws and 5/16" bolts with nuts (may not be supplied), fabricate rear support for horizontal tracks. Attach horizontal tracks to the rear supports with 5/16"-18 x 1-1/4" hex bolts and nuts (may not be supplied). Horizontal tracks must be level and parallel to the door within 3/4" to 7/8" maximum of door edge.

**⚠ WARNING**

**KEEP HORIZONTAL TRACK PARALLEL AND WITHIN 3/4" TO 7/8" MAXIMUM OF DOOR EDGE, OTHERWISE DOOR COULD FALL, RESULTING IN SEVERE OR FATAL INJURY.**

**IMPORTANT:** DO NOT SUPPORT THE WEIGHT OF THE DOOR ON ANY PART OF THE HORIZONTAL TRACK HANGER THAT CANTILEVERS 4" OR MORE BEYOND A SOUND FRAMING MEMBER.

**NOTE:** If rear supports are to be installed over drywall, use (2) 5/16" x 2" hex head lag screws.

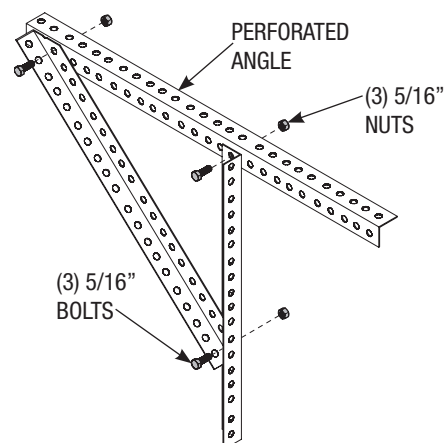
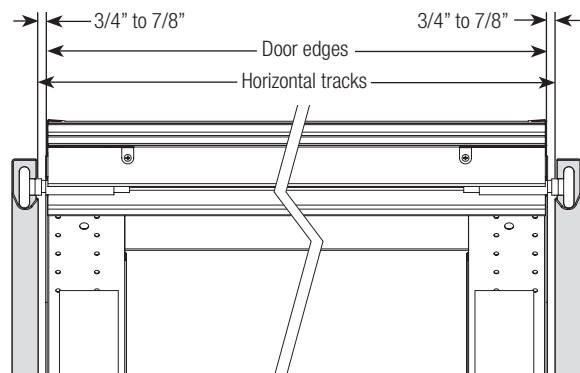
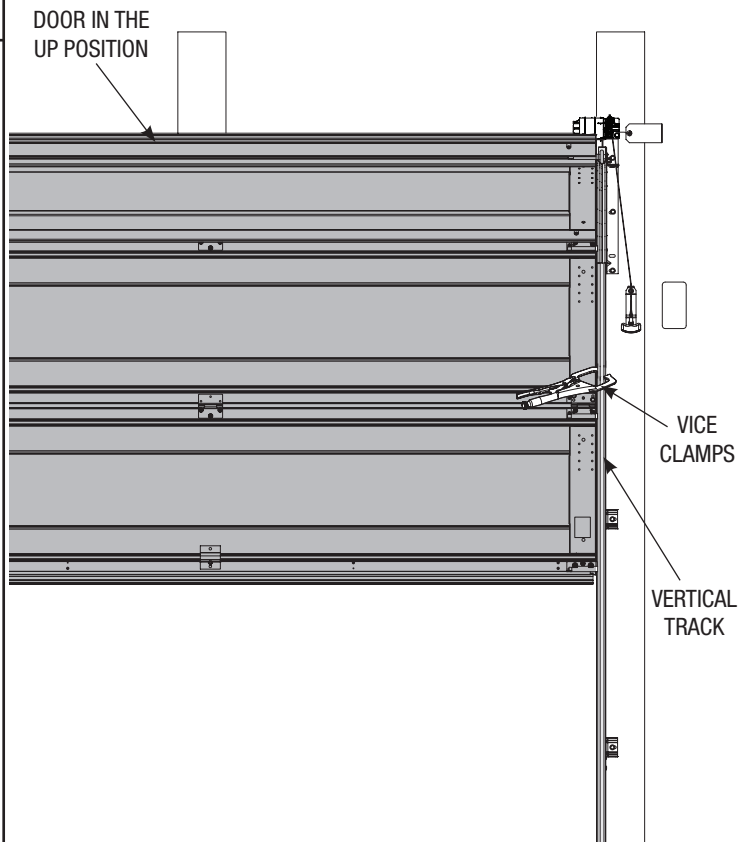
**NOTE:** If an idrive® opener is installed, position horizontal tracks one hole above level when securing it to rear supports.

**NOTE:** 30" angle must be attached to sound framing members and nails should not be used.

Now, permanently attach the weather seal on both door jambs and header (Temporarily attached in PREPARING THE OPENING on page 6). Avoid pushing weather seal too tightly against face of door.

**⚠ WARNING**

**PRIOR TO WINDING OR MAKING ADJUSTMENTS TO THE SPRINGS, ENSURE YOU'RE WINDING IN THE PROPER DIRECTION AS STATED IN THE INSTALLATION INSTRUCTIONS. OTHERWISE THE SPRING FITTINGS MAY RELEASE FROM SPRING IF NOT WOUND IN THE PROPER DIRECTION AND COULD RESULT IN SEVERE OR FATAL INJURY.**



## Rear Support Continued...

Now, lift door and check it's balance. Adjust, if door lifts by itself (hard to pull down) or if door is difficult to lift (easy to pull down). Anytime spring adjustments are made, ratchet pawl knob must be in the upper position to add/remove required number of spring turns (refer to step 21). To adjust springs, only add or remove a maximum of 3/10 of a turn (three teeth of ratchet wheel) at a time. Both sides need to be adjusted equally on double spring doors.

**Add Spring Tension:** The ratchet wheel is made of 10 teeth. To add spring tension, ensure the ratchet and socket is set so that it will tighten counter clockwise on the right hand side, and clockwise on the left hand side. Place the ratchet with 5/8" socket onto the winding shaft, pull down to add 3/10 of a turn. Watch as three teeth of the ratchet wheel pass over the pawl, creating three "clicks".

**Remove Spring Tension:** To remove spring tension, ensure the ratchet and socket is set so that it will tighten counter clockwise on the right hand side and clockwise on the left hand side. It is recommended that a regular 5/8" wrench be used. Place the wrench onto the winding shaft. Pull down on the wrench to relieve pressure between the pawl and the ratchet wheel. Push in on the pawl to allow the three ratchet wheel teeth to pass by the pawl, as you carefully allow the wrench to be rotated upward by the spring tension. Release the pawl to allow it to engage with the ratchet wheel.

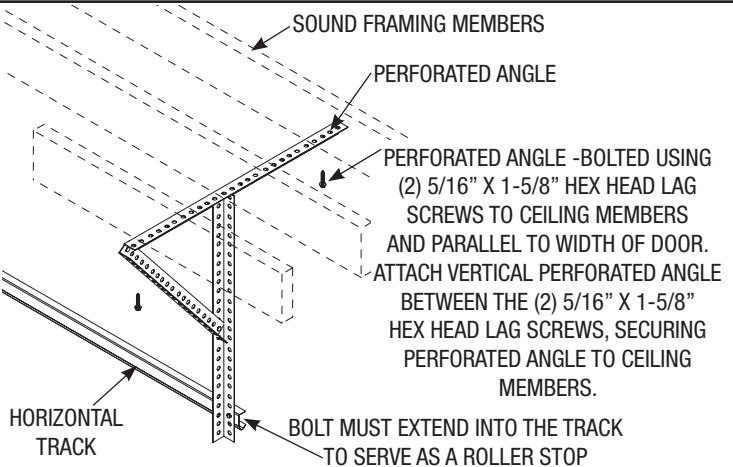
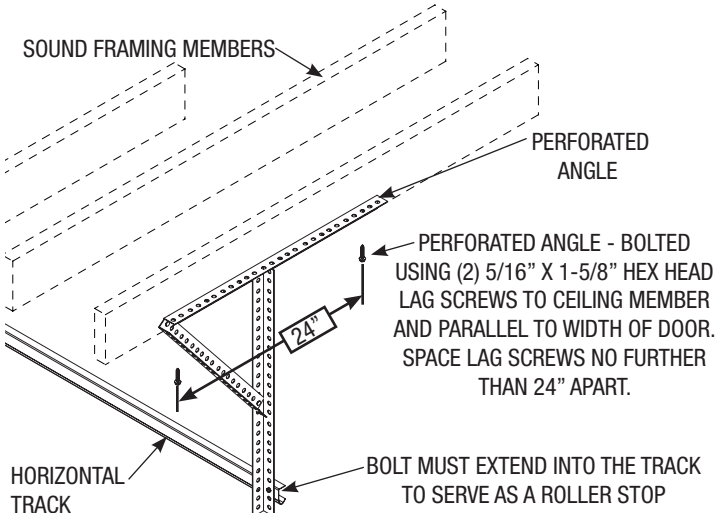
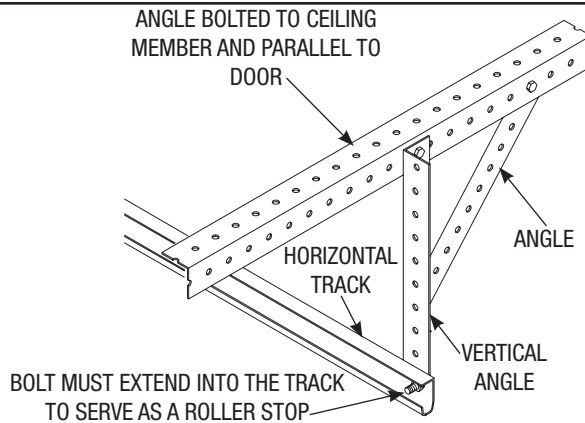
**IMPORTANT:** BE PREPARED TO HOLD THE FULL TENSION OF THE SPRING.

**IMPORTANT:** DO NOT ADD OR REMOVE MORE THAN 1 SPRING TURNS (1 SPRING TURN EQUALS 10 TEETH ON RATCHET WHEEL) FROM THE RECOMMENDED NUMBER OF TURNS SHOWN ON THE SPRING TURN CHART.

If the door still does not operate easily, lower the door into the closed position, UNWIND SPRING(S) COMPLETELY, and recheck the following items:

- 1.) Check the door for level.
- 2.) Check the TorqueMaster® tube and flagangles for level and plumb.
- 3.) Check the distance between the flagangles must be door width plus 3-3/8" to 3-1/2".
- 4.) Check the counterbalance cables for equal tension, adjust if necessary.
- 5.) Rewind the spring(s).
- 6.) Make sure door isn't rubbing on jambs.

**NOTE:** If an idrive® was installed and you have completed your rear support installation, refer to the idrive Installation Instructions and Owner's Manual to complete your idrive installation.







## TorqueMaster® Plus Reset Instructions

### Tools Needed:

5/8" Socket  
Ratchet Wrench  
3" Extension  
Vice Clamps (Pair)  
3" Extension

**IMPORTANT!** THE OPENER FORCE SETTINGS MUST BE ADJUSTED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS. SOME LIGHTER WEIGHT DOORS ARE DESIGNED TO OPERATE WITH A SINGLE COUNTER-BALANCE SPRING. IF THAT COUNTER-BALANCE SPRING BREAKS AND THE OPENER'S FORCE SETTINGS ARE NOT ADJUSTED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS, THE OPENER MAY THEN HAVE THE CAPABILITY OF LIFTING THE DOOR TO THE OPEN POSITION, DESPITE THE BROKEN COUNTER-BALANCE SPRING. THIS SCENARIO WILL CAUSE THE COUNTER-BALANCE CABLES TO GO SLACK AND ENGAGE THE TORQUEMASTER® PLUS SAFETY SYSTEM. IF A PERSON IS UNAWARE OF THE SLACK CABLES AND THE ENGAGED TORQUEMASTER® PLUS SAFETY SYSTEM AND ACTIVATES THE MIS-ADJUSTED OPENER, DAMAGE WILL LIKELY OCCUR TO THE DOOR AND OPENER. THE POTENTIAL ALSO EXISTS THAT THE PERSON ACTIVATING THE OPENER UNDER THIS SCENARIO COULD BE SEVERELY INJURED.

### WARNING

READ THESE INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING TO RESET THE TORQUEMASTER® PLUS SYSTEM. IF IN QUESTION ABOUT ANY OF THE PROCEDURES, DO NOT PERFORM THE WORK. INSTEAD, HAVE A TRAINED DOOR SYSTEMS TECHNICIAN RESET THE SYSTEM.

### WARNING

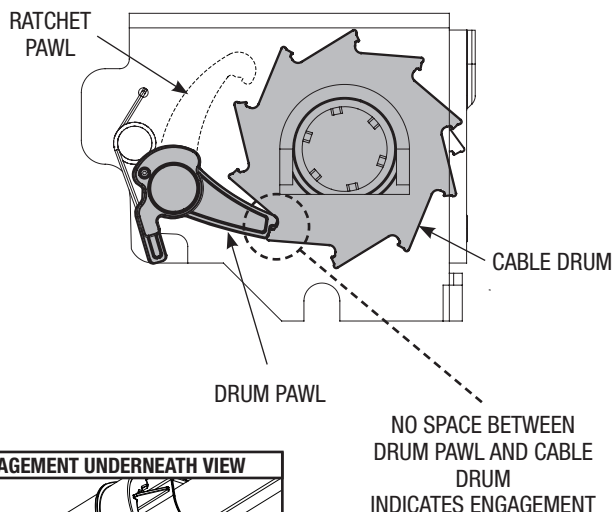
TO AVOID SEVERE OR FATAL INJURY, DO NOT STAND OR WALK UNDER A MOVING DOOR, OR PERMIT ANYONE TO STAND OR WALK UNDER AN ELECTRICALLY OPERATED DOOR

This door is equipped with a TorqueMaster® Plus system, a safety feature which prevents the door from rapidly descending in case of spring failure or forceful manual operation. If the system engages with the door in the open position, personal items that are left unattended in the garage or home are at risk to theft. To insure the safekeeping of these items, close the garage door.

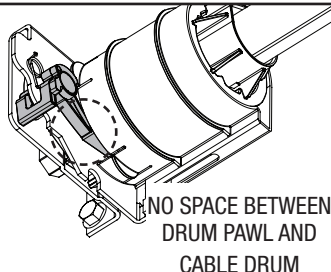
#### Typical signs of an engaged system:

**Single spring system:** Visually inspect the TorqueMaster® Plus right hand end bracket to confirm that the system has engaged (see illustration). If the system is engaged then the door will not close. If the opener force settings were properly set during the initial installation, the door will not open.

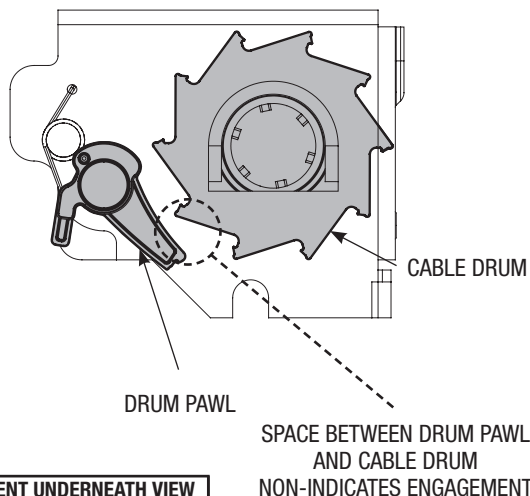
#### ENGAGEMENT SIDE VIEW



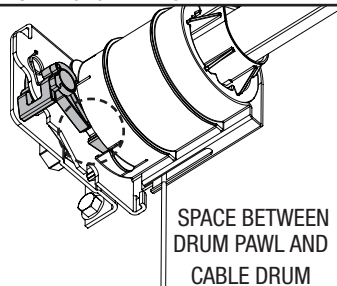
#### ENGAGEMENT UNDERNEATH VIEW



#### NON-ENGAGEMENT SIDE VIEW



#### NON-ENGAGEMENT UNDERNEATH VIEW



## TorqueMaster® Plus Reset Instructions Continued...

If the opener can physically overcome the weight of the door and lift it to the open position, then the counterbalance cables will be slack. If the system is engaged, DO NOT attempt to make the repairs. Instead, have a trained door system technician make the necessary repairs to cables, spring assemblies and other hardware.

**Double spring system:** Visually inspect the TorqueMaster® Plus end brackets to confirm that the system has engaged (see illustration). Door will open, but will not close. Door makes a distinct “clicking” noise upon being opened. If the system is engaged, carefully follow the reset instructions below or refer to the reset tag (attached to right hand end bracket) to reset the TorqueMaster® Plus system.

### RESETTING AN ENGAGED TORQUEMASTER® PLUS DOUBLE SPRING SYSTEMS ONLY:

1. First, locate and visually inspect the TorqueMaster® Plus end brackets to confirm that the system is engaged (see illustration).
2. Disengage the opener (if installed) by pulling or placing the emergency disconnect in the manual operated position.
3. With assistance, raise the door to the fully open position.
4. Place vice clamps onto both vertical tracks just below the bottom roller on both sides.
5. Now is a good time to remove vehicles or personal items from garage to provide clear access to end brackets.
6. Flip the ratchet pawl knob on both end brackets to the upper position (see illustration).
7. Raise door 2”-3” and then lower door. Repeat this process until the system resets (see disengaged system illustrations).

**IMPORTANT:** BE PREPARED TO SUPPORT THE TOTAL WEIGHT OF THE DOOR.

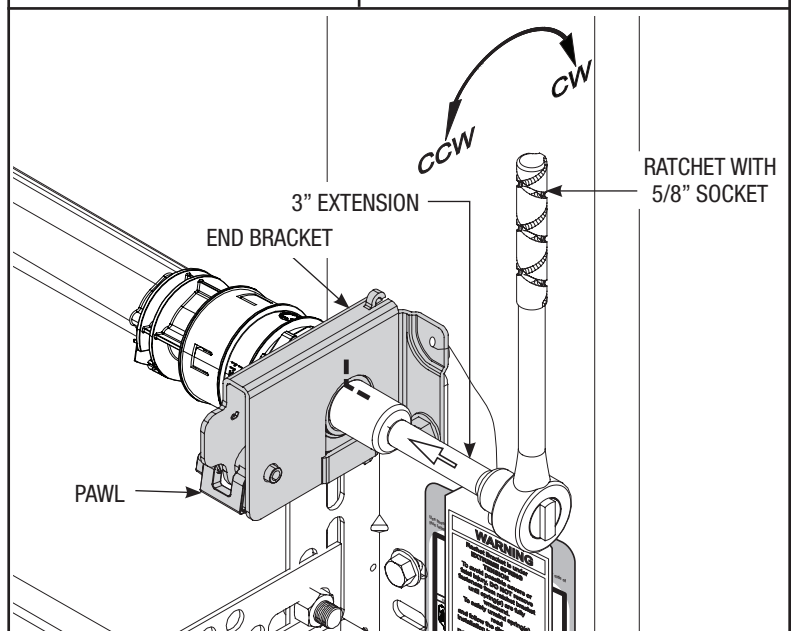
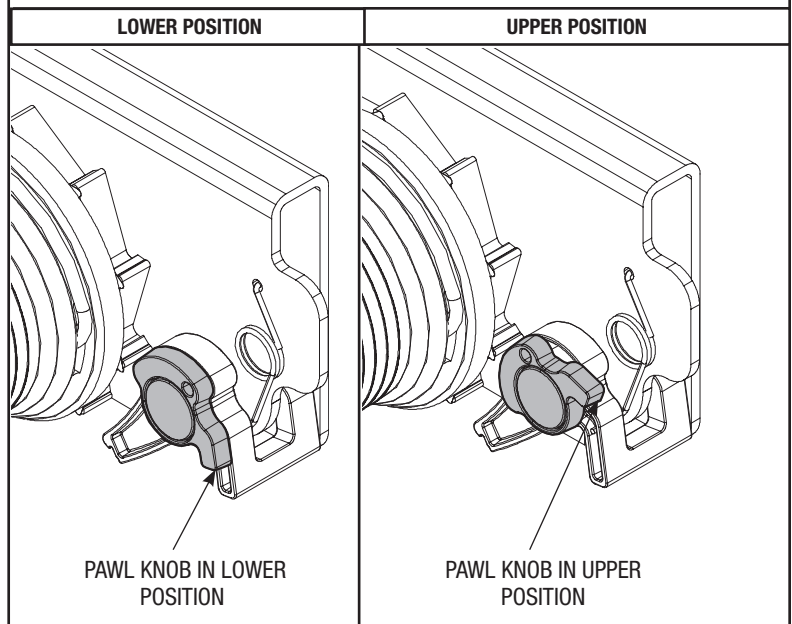
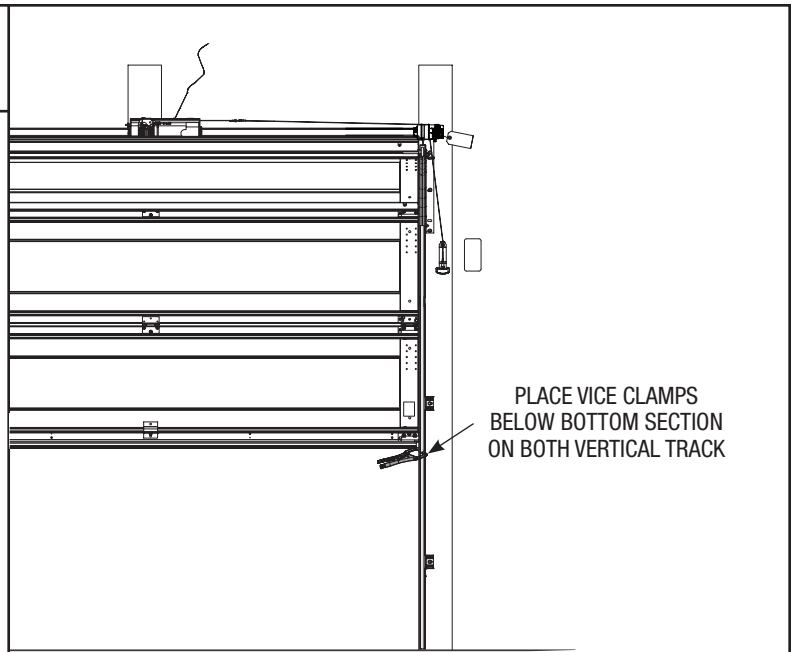
8. Cautionously remove the vice clamps from the vertical tracks. With assistance, lower door.

### CHECKING SPRINGS FOR TENSION:

9. Starting on the right hand side, place a ratchet wrench with 5/8” socket on the TorqueMaster® Plus winding shaft (see illustration). Ensure ratchet is set so that it will tighten counter clockwise on the right hand side, and clockwise on the left hand side. If tension is present, remove the ratchet and check the left hand side. If springs have tension, proceed to the paragraph titled BALANCING DOOR; if no spring tension is present, contact a qualified door systems technician to replace the spring(s).

**IMPORTANT!** TO AVOID POSSIBLE INJURY, HAVE A TRAINED DOOR SYSTEM TECHNICIAN MAKE ADJUSTMENTS/REPAIRS TO CABLES, SPRING ASSEMBLIES AND OTHER HARDWARE.

### BALANCING DOOR:





## TorqueMaster® Plus Reset Instructions Continued...

### **⚠ WARNING**

PRIOR TO WINDING OR MAKING ADJUSTMENTS TO THE SPRINGS, ENSURE YOU'RE WINDING IN THE PROPER DIRECTION AS STATED IN THE INSTALLATION INSTRUCTIONS. OTHERWISE THE SPRING FITTINGS MAY RELEASE FROM SPRING IF NOT WOUND IN THE PROPER DIRECTION AND COULD RESULT IN SEVERE OR FATAL INJURY. Lift the door and check its balance. Adjust springs, if door lifts by itself (hard to pull down) or if door is difficult to lift (easy to pull down). Anytime spring adjustments are made, ratchet pawl knob must be in the upper position (see illustration). An unbalanced door can cause idrive® or Torquemaster® Plus operation problems.

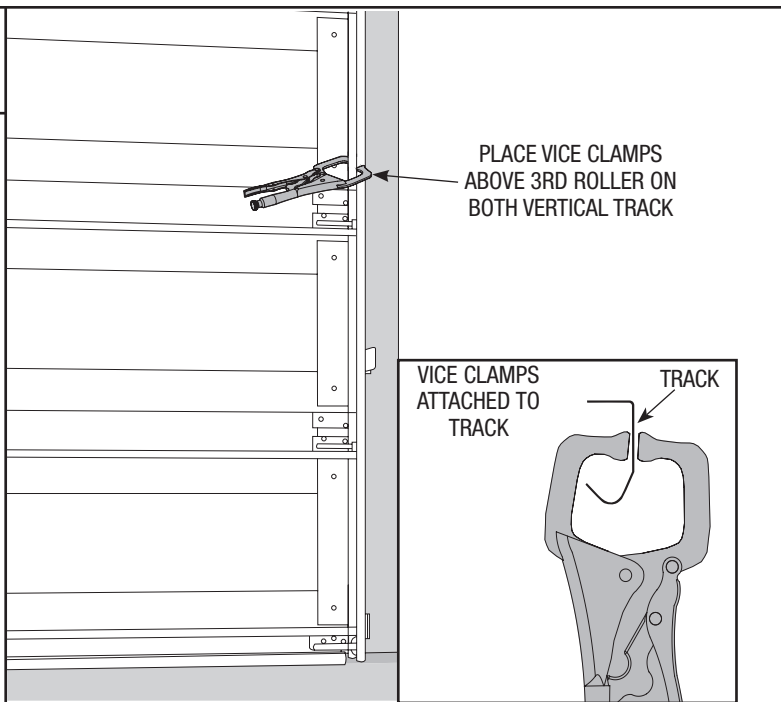
**IMPORTANT!** TO ADJUST SPRINGS, ONLY ADD OR REMOVE A MAXIMUM OF 3/10 OF A TURN (THREE TEETH ON THE RATCHET WHEEL) AT A TIME. BOTH SIDES NEED TO BE ADJUSTED EQUALLY ON DOUBLE SPRING DOORS.

Close the door and place vice clamps onto both vertical tracks just above the third roller. This is to prevent the garage door from raising while adjusting the counterbalance spring(s).

**To Add Spring Tension:** The ratchet wheel is made of 10 teeth. To add spring tension, ensure the ratchet wrench is set so that it will tighten counter clockwise on the right hand side, and clockwise on the left hand side. Place the ratchet wrench with 5/8" socket onto the winding shaft, pull down to add 3/10 of a turn. Watch as three teeth of the ratchet wheel pass over the pawl, creating three "clicks".

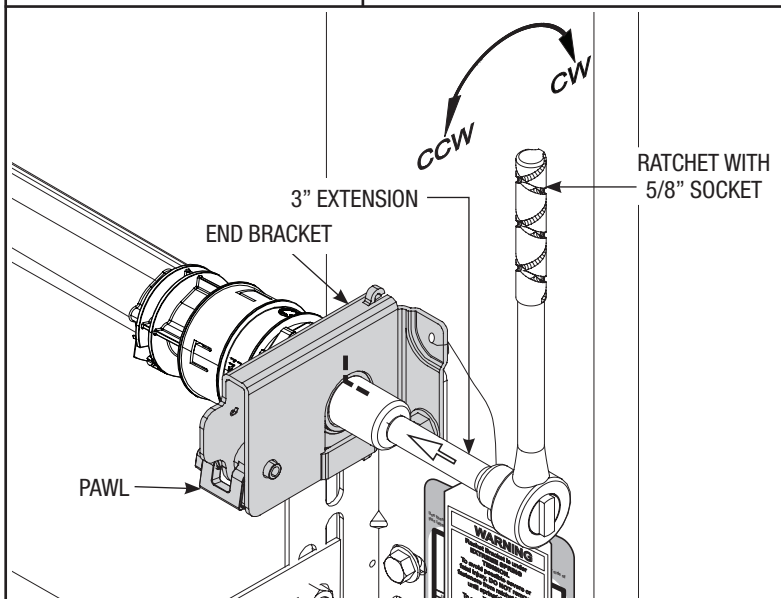
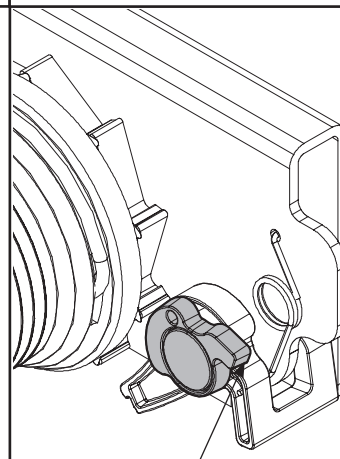
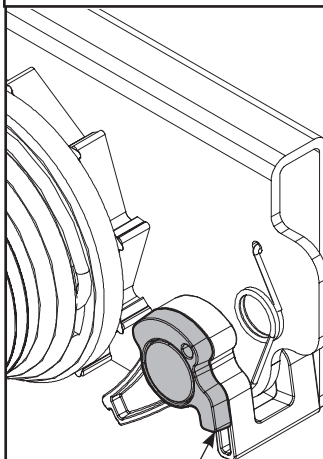
**To Remove Spring Tension:** To remove spring tension, ensure the ratchet wrench is set so that it will tighten counter clockwise on the right hand side and clockwise on the left hand side. Place the ratchet wrench with 5/8" socket onto the winding shaft. Pull down on the ratchet to relieve pressure between the pawl and the ratchet wheel. Push in on the pawl to allow the three ratchet wheel teeth to pass by the pawl, as you carefully allow the ratchet wrench to be rotated upward by the spring tension. Release the pawl to allow it to engage with the ratchet wheel.

Remove the vice clamps from the vertical tracks, re-check door balance and adjust if necessary. When door is balanced and adjusted properly, place the ratchet pawl knobs in the active position (lower position).



LOWER POSITION

UPPER POSITION





## Pull Rope

### Tools Needed:

Power Drill

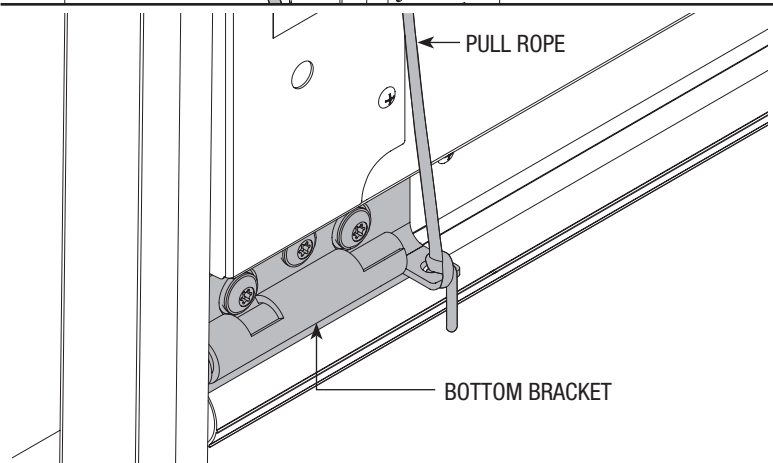
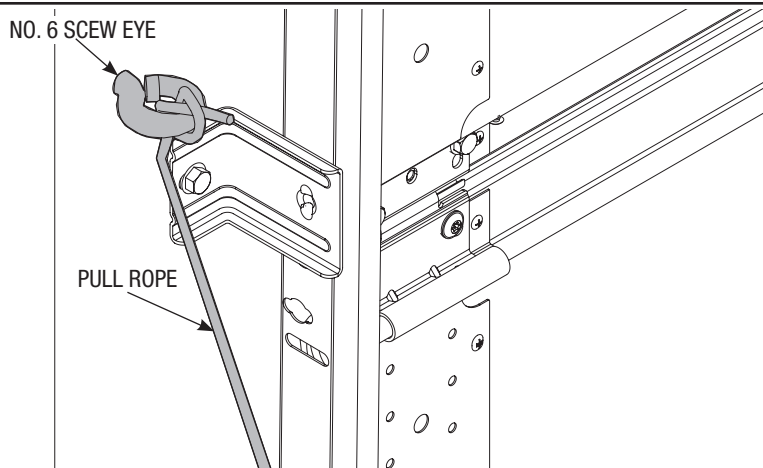
1/8" Drill Bit

Tape Measure

### **WARNING**

**DO NOT INSTALL PULL ROPES ON DOORS WITH ELECTRIC OPERATORS. CHILDREN MAY BECOME ENTANGLED IN THE ROPE CAUSING SEVERE OR FATAL INJURY.**

Screw the No. 6 screw eye into the wood jamb approximately 48" to 50" (1220 to 1270 mm) from the floor. Tie the pull rope to the screw eye and to the bottom bracket as shown.





## Trolley Operator

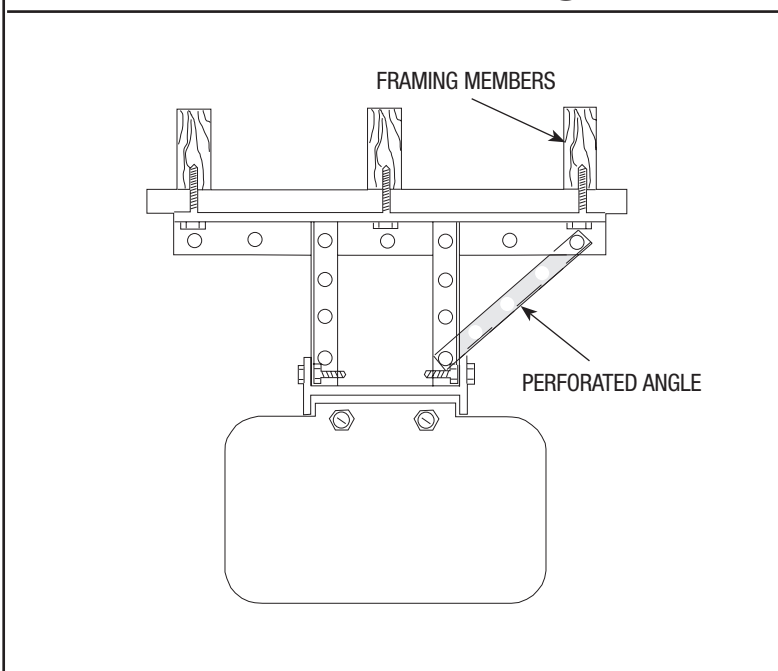
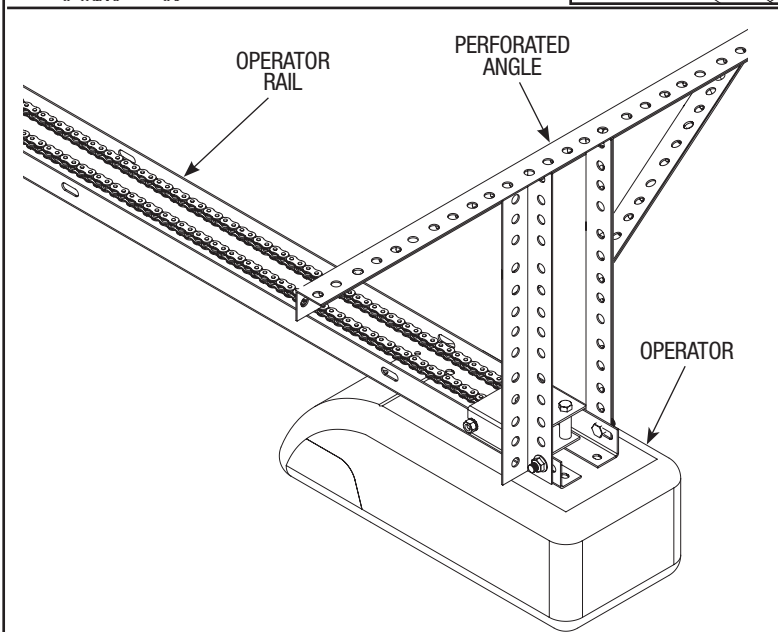
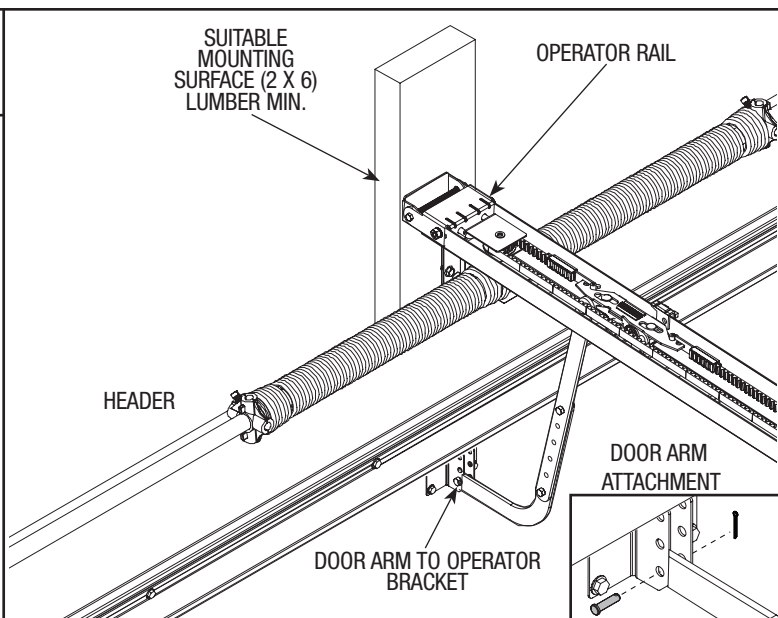
Tools Needed:

### **⚠ WARNING**

OPERATOR MUST BE TESTED AT TIME OF INSTALLATION AND MONTHLY THEREAFTER AS DESCRIBED IN YOUR INSTALLATION INSTRUCTIONS AND OWNER'S MANUAL, TO ENSURE THAT SAFETY FEATURES FUNCTION PROPERLY. FAILURE TO TEST OR MAKE ANY NECESSARY ADJUSTMENTS OR REPAIRS, MAY RESULT IN SEVERE OR FATAL INJURY.

1. Install operator rail 1/2" to 1-1/2" (13 - 38 mm) above high arc of top section of the door.
2. Attach operator rail to suitable mounting surface. (2 x 6 lumber minimum)
3. Mount operator to ceiling so that 1" to 1-1/2" (25 - 38 mm) clearance is maintained between trolley rail and top section when door is fully open (trolley rail will slope down towards rear).
4. Attach operator to ceiling using perforated angle.
5. Attach door arm to operator bracket installed in Step 5 with clevis pin and cotter pin.

**IMPORTANT!** PERFORATED ANGLES MUST BE SECURELY ATTACHED TO SOUND FRAMING MEMBER(S).





## Cleaning

### Cleaning Your Garage Door

#### **IMPORTANT: DO NOT USE A PRESSURE WASHER ON YOUR GARAGE DOOR!**

While factory-applied finishes on garage doors are durable, it is desirable to clean them on a routine basis. Some discoloration of the finish may occur when a door has been exposed to dirt-laden atmosphere for a period of time. Slight chalking may also occur as a result of direct exposure to sunlight.

Cleaning the door will generally restore the appearance of the finish. To maintain an aesthetically pleasing finish of the garage door, a periodic washing of the garage door is recommended.

#### **The following cleaning solution is recommended:**

A mild detergent solution consisting of one cup detergent (with less than 0.5% phosphate) dissolved into five gallons of warm water will aid in the removal of most dirt.

**NOTE:** The use of detergents containing greater than 0.5% phosphate is not recommended for use in general cleaning of garage doors.

**NOTE:** Be sure to clean behind weather stripping on both sides and top of door.

**CAUTION:** NEVER MIX CLEANSERS OR DETERGENTS WITH BLEACH.

#### **GLASS CLEANING INSTRUCTIONS**

Clean with a mild detergent solution (same as above) and a soft cloth. After cleaning, rinse thoroughly.

#### **ACRYLIC CLEANING INSTRUCTIONS**

Clean acrylic glazing with nonabrasive soap or detergent and plenty of water. Use your bare hands to feel and dislodge any caked on particles. A soft, grit-free cloth, sponge or chamois may be used to wipe the surface. Do not use hard or rough cloths that will scratch the acrylic glazing. Dry glazing with a clean damp chamois.

**NOTE:** DO NOT USE any window cleaning fluids, scouring compounds, gritty cloths or solvent-based cleaners of any kind.



## Painting

### Surface Preparation for Painting

Wax on the surface must be removed or paint peeling/flaking will result. To remove this wax, it will be necessary to lightly scuff the surface with a fine steel wool pad, saturated with soapy water. A final wipe and rinse should be done with clean water only, to remove any loose particles and any soapy film residue.

Surface scratches, which have not exposed the metal substrate, can be lightly buffed or sanded with 0000 steel wool or No. 400 sand paper to create a smoother surface. Care must be taken to not expose the substrate under the paint. Once the substrate is exposed, the likelihood for rusting is greatly increased.

If substrate is exposed, it must be treated to prevent rust from forming. Sand the exposed area lightly and paint with a high quality metal primer, specifically intended for galvanized surfaces, to protect the area from corrosion. Allow for drying time on primer can label before applying topcoat.

The surface of the factory-applied finish, that is being painted, must not be too smooth, or the paint will not adhere to it. It is advisable to test in an inconspicuous area, to evaluate adhesion. If poor adhesion is observed, surface preparation for painting the factory-applied finish must be repeated until desired results are achieved. Again, care must be taken to not expose the substrate under the paint.

#### **Painting**

**NOTE:** Your model 9700 door can be painted any color, including black, to match your homes appearance.

After surface has been properly prepared, it must be allowed to dry thoroughly, and then coated immediately with premium quality latex house paint. Follow paint label directions explicitly. Oil base or solvent base paints are not recommended. Please note that if **substrate is** exposed and not properly primed, painting with latex paint may cause accelerated rusting of the steel in the exposed area.

## Painting Continued....

### NOTES:

1. Repainting of finish painted steel doors cannot be warranted, as this condition is totally beyond the door manufacturer's control.
2. Consult a professional coatings contractor if in doubt about any of the above directions.
3. Follow directions explicitly on the paint container labels for proper applications of coatings and disposal of containers. Pay particular attention to acceptable weather and temperature conditions in which to paint.

## Lifetime Limited Warranty Model 9700

Subject to the terms and conditions contained in this Lifetime Limited Warranty, Wayne-Dalton ("Manufacturer") warrants the sections of the door, which is described at the top of this page, **for as long as you own the door** against:

(i) Peeling, cracking, or chalking of the original factory-applied coating on the door as a result of a defect in the original factory-applied coating or in the application of the original factory-applied coating, in cases where the door sections and the original factory-applied coating: (a) have not been subjected to adverse atmospheric conditions or contaminants (such as salt water or other marine environment, or to toxic or abrasive substances, including those in the air); (b) have been maintained in compliance with Manufacturer's recommendations; and (c) have not been subject to physical abrasion, impacted by a hard object, or have been punctured.

(ii) The door becoming inoperable due to rust-through of the steel skin from the core of the door section, caused by cracking, splitting, or other deterioration of the steel skin, or due to structural failure caused by separation or degradation of the foam insulation.

The Manufacturer warrants the garage door hardware (except springs) and the tracks of the above-described door, for as long as you own the door, against defects in material and workmanship, subject to all the terms and conditions below.

The Manufacturer warrants those component parts of the door not covered by the preceding provisions of this Lifetime Limited Warranty against defects in material and workmanship for a period of **ONE (1) YEAR** from the date of installation.

The Manufacturer warrants the factory-applied finish and the factory attached stiles against fading and cosmetic changes from the time of installation for **TWO (2) YEARS**. The factory attached stiles are warranted against peeling, cracking, chalking, or delamination from the time of installation for **TWO (2) YEARS**. If the door is re-stained or re-painted, the **TWO (2) YEARS** warranty for the factory-applied finish is void.

After a period of **TWENTY (20) YEARS**, from time of installation, replacement of Lifetime Limited Warranty materials will be pro-rated at 50 per cent of Manufacturer's published list pricing at time of claim, and you must pay this amount.

This Limited Warranty is extended only to the person who purchased the product and continues to own the premises (where the door is installed) as his/her primary residence ("Buyer"). This Limited Warranty does not apply to residences other than primary, or to commercial or industrial installations, or to installations on rental property (even when used by a tenant as a residence). This Limited Warranty is not transferable to any other person (even when the premises is sold), nor does it extend benefits to any other person. As a result this Limited Warranty does NOT apply to any person who purchases the product from someone other than an authorized Wayne-Dalton dealer or distributor.

The Manufacturer will not be responsible for any damage attributable to improper storage, improper installation, or any alteration of the door or its components, abuse, damage from corrosive fumes or substances, salt spray or saltwater air, fire, Acts of God, failure to properly maintain the door, or attempt to use the door, its components or related products for other than its intended purpose and its customary usage. This Limited Warranty does not cover ordinary wear. This Limited Warranty will be voided if the original finish is painted over, unless Manufacturer's preparation and painting instructions are followed explicitly. This Limited Warranty will be voided if any holes are drilled into the door, other than those specified by the Manufacturer.

THIS LIMITED WARRANTY COVERS A CONSUMER PRODUCT AS DEFINED BY THE MAGNUSON-MOSS ACT. NO WARRANTIES, EXPRESS OR IMPLIED (INCLUDING BUT NOT LIMITED TO THE WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE) WILL EXTEND BEYOND THE TIME PERIOD SET FORTH IN **UNDERScoreD BOLD FACE TYPE** IN THIS LIMITED WARRANTY, ABOVE.

- Some States do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

Any claim under this Limited Warranty must be made in writing, within the applicable warranty period, to the dealer from which the product was purchased. Unless the dealer is no longer in business, a written claim to the Manufacturer will be the same as if no claim had been made at all.

At the Manufacturer's option, pursuant to the dealer having notified the Manufacturer of a warranty claim, a service representative may inspect the product on site, or Buyer may be required to return the product to the Manufacturer at Buyer's expense. Buyer agrees to cooperate with any representative of the Manufacturer and to give such representative full access to the product with the claimed defect and full access to the location of its installation.

If the Manufacturer determines that the claim is valid under the terms of this Limited Warranty, the Manufacturer will cause the defective product to be repaired or replaced. The decision about the manner in which the defect will be remedied will be at the discretion of the Manufacturer, subject to applicable law. THE REMEDY WILL COVER ONLY MATERIAL. THIS LIMITED WARRANTY DOES NOT COVER OTHER CHARGES, SUCH AS FIELD SERVICE LABOR FOR REMOVAL, INSTALLATION, PAINTING, SHIPPING, ETC.

Any repairs or replacements arranged by Manufacturer will be covered by (and subject to) the terms, conditions, limitations and exceptions of this Limited Warranty; provided, however, that the installation date for the repaired or replaced product will be deemed to be the date the original product was installed, and this Limited Warranty will expire at the same time as if there had been no defect. If a claim under this Limited Warranty is resolved in a manner other than described in the immediately preceding paragraph, then neither this Limited Warranty nor any other warranty from the Manufacturer will cover the repaired or replaced portion of the product.

THE REMEDIES FOR THE BUYER DESCRIBED IN THIS LIMITED WARRANTY ARE EXCLUSIVE and take the place of any other remedy. The liability of the Manufacturer, whether in contract or tort, under warranty, product liability, or otherwise, will not go beyond the Manufacturer's obligation to repair or replace, at its option, as described above. THE MANUFACTURER WILL NOT UNDER ANY CIRCUMSTANCES BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, including (but not limited to) damage or loss of other property or equipment, personal injury, loss of profits or revenues, business or service interruptions, cost of capital, cost of purchase or replacement of other goods, or claims of third parties for any of the foregoing.

- Some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

No employee, distributor, dealer, representative, or other person has the authority to modify any term or condition contained in this Limited Warranty or to grant any other warranty on behalf of or binding on the Manufacturer, and anyone's attempt to do so will be null and void.

Buyer should be prepared to verify the date of installation to the satisfaction of the Manufacturer.

The rights and obligations of the Manufacturer and Buyer under this Limited Warranty will be governed by the laws of the State of Ohio, USA, to the extent permitted by law.

- This Limited Warranty gives you specific legal rights and you may also have other rights, which may vary from State to State.

Covered by one or more of the following Patents; 5,408,724; 5,409,051; 5,419,010; 5,495,640; 5,522,446; 5,562,141; 5,566,740; 5,568,672; 5,718,533; 6,019,269; 6,089,304; 6,644,378; 6,374,567; 6,561,256; 6,527,037; 6,640,872; 6,672,362; 6,725,898; 6,843,300; 6,915,573; 6,951,237; 7,014,386; 7,036,548; 7,059,380; 7,121,317; 7,128,123; 7,134,471; 7,134,472; 7,219,392; 7,254,868. Canadian: 2,384,936; 2,477,445; 2,495,175; 2,507,590; 2,530,701; 2,530,74; 2, 2,532,824. Other US and Foreign Patents pending.

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### **Please Do Not Return This Product To The Store**

Contact your local Wayne-Dalton dealer. To find your local Wayne-Dalton dealer, refer to your local yellow pages business listings or go to the **Find a Dealer** section online at **[www.Wayne-Dalton.com](http://www.Wayne-Dalton.com)**

Thank you for your purchase